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CT-43 OPERATIONS PROCEDURES

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This volume implements AFPD 11-2, *Aircraft Rules and Procedures*. It establishes policy for the operation of CT-43 aircraft to safely and successfully accomplish their worldwide operational support airlift (OSA) mission. It applies to all commanders and aircrew assigned or attached to all flying activities of commands operating these aircraft. It does not apply to the Air National Guard or Air Force Reserve Command. The use of the name or mark of any specific manufacturer, commercial product, commodity, service in this publication does not imply endorsement by the Air Force.

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This document is new and must be completely reviewed. It contains references to the following field (subordinate level) forms which, until converted to departmental level forms, may be obtained from the respective MAJCOM publication office: Air Mobility Command (AMC) Form 43, 54, 196, and 423.

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Chapter 1

GENERAL INFORMATION

1.1. General:

1.1.1. This AFI provides guidelines for CT-43 operations and applies to CT-43 aircrews and all management levels concerned with CT-43 operations. It is a compilation of information from aircraft flight manuals, *flight information publication (FLIP)* and other Air Force directives, as well as an original source document for many areas. In the case of any conflicts, revisions, and matters of interpretation, basic source directives have precedence. For areas where this AFI is the source document, waiver authority will be in accordance with paragraph **1.4.3.**

1.1.2. This AFI will be used by all units and agencies involved in or supporting CT-43 operations, including planning staffs from headquarters to aircrew level as well as transportation and base operations passenger manifesting agencies.

1.2. Applicability. This AFI is applicable to all individuals and units operating CT-43 aircraft.

1.3. Key Words Explained:

1.3.1. "Will" indicates a mandatory requirement.

1.3.2. "Should" is normally used to indicate a preferred, but not mandatory, method of accomplishment.

1.3.3. "May" indicates an acceptable or suggested means of accomplishment.

1.3.4. "Note" indicates operating procedures, techniques, etc., that are considered essential to emphasize.

1.4. Deviations and Waivers:

1.4.1. Do not deviate from the policies and guidance in this AFI under normal circumstances, except for safety.

1.4.2. When it is necessary to protect the crew or aircraft from a situation not covered by this AFI and immediate action is required, the aircraft commander (AC) has ultimate authority and responsibility for the course of action to be taken. Report all deviations or exceptions without waiver through channels to MAJCOM OPR.

1.4.3. Waiver authority for the contents of this document is the MAJCOM DO, according to AFI 11-202, Volume 3, *General Flight Rules.* ***EXCEPTION:*** Waiver authority for contingency missions will be listed in the OPord, tasking order, etc., or the director of mobility forces (DIRMOBFOR) (or equivalent) for the agency with command and control (C2) of the aircraft. Crewmembers may request additional information or confirmation from their home unit or MAJCOM DO.

1.5. Supplements. Each MAJCOM or operational theater may supplement this AFI; however, these supplements will not be less restrictive than or contradict the basic AFI. MAJCOM DOs will initiate long-term waiver requests to the basic AFI. Specify long-term waiver approval authority, date, and expi-

ration date in the appropriate MAJCOM supplement. Limit supplement information to unique requirements only.

1.5.1. Use only the basic AFI for planning or operations involving forces from lead and user commands. Commanders may use approved MAJCOM supplement procedures with assigned and/or chopped forces if these forces receive appropriate training and the duration is specified. Commanders should not assume or expect aircrews from another command to perform MAJCOM-specific procedures from their supplements unless these provisions are met. Questions by aircrews, planners, and staff should be forwarded to the OPR of the publication.

1.5.2. Forward MAJCOM-approved supplements (with attached AF Form 673, **Request To Issue Publication**) to HQ AETC/DOF, 1 F Street, Suite 2, Randolph AFB TX 78150-4325. HQ AETC/DOF will provide a recommendation to HQ AETC/DO and forward it to HQ USAF/XOOT for HQ USAF/XOO approval.

1.5.3. Prior to publication, units will send one copy of local operating procedures (**Chapter 10**) through their appropriate numbered Air Force (NAF) for coordination to their parent MAJCOM OPR for validation. Send final copies to HQ USAF/XO, HQ AETC/DOF, parent MAJCOM, and appropriate NAF.

1.6. Requisition and Distribution Procedures. Unit commanders will provide access to this AFI for crewmembers and associated support personnel. This publication is available digitally on the Air Force site at **http://afpubs.hq.af.mil**. In addition, see instructions on this web site for accessing the AF CD-ROM On-Demand.

1.7. Improvement Recommendations. Send comments and suggested improvements to this instruction on AF Form 847, **Recommendation for Change of Publication,** through channels to HQ AETC/DOF, 1 F Street Suite 2, Randolph AFB TX 78150-4325, according to AFI 11-215, *Flight Manuals Programs (FMP)*, and applicable supplements.

1.8. Definitions. See **Attachment 1** for a glossary of references and supporting information used in this publication. Also in **Attachment 1** are terms and abbreviations commonly used in the aviation community and as shown in the *Federal Aviation Regulation (FAR)* and the *DoD FLIP*, General Planning, Chapter 2.

Chapter 2

COMMAND AND CONTROL (C2)

2.1. General. C2 of tanker and airlift forces is exercised through a network of C2 centers, which are executive agents for commanders exercising operational control over mobility forces. The C2 center network consists of the US Transportation Command (USTRANSCOM) and Joint Operational Support Airlift Center (JOSAC), AMC Tanker Airlift Control Center (TACC), theater air operations centers (AOC), air mobility elements (AME), unit C2 centers, air mobility control centers (AMCC), tanker airlift control elements (TALCE), combat control teams (CCT), Air National Guard Readiness Center (ANGRC) Command Center, and Pacific Air Force (PACAF) and US Air Forces in Europe (USAFE) air mobility operation control centers (AMOCC).

2.2. Execution Authority. Execution approval will be received through the local command post or command element. The operations group commander will be the executing authority for local training missions. Missions operating outside communications channels will be executed by the AC.

2.2.1. Supplemental Training Mission (STM). Opportune airlift of cargo and mission personnel may be accomplished as a byproduct of crew training missions. STMs may be authorized when minor adjustments can be made to a scheduled training mission or when a productive aircrew training mission can be generated for the airlift. The training mission will not be degraded in any manner to accomplish the STM. Use of STMs for logistical support will be authorized only when normal military or commercial transportation modes are unable to provide required support. With wing commander coordination, CONUS AMC STMs must be scheduled with JOSAC. (AETC, PACAF, and USAFE will determine approval process for their aircraft and publish it in their supplements to this AFI.) On STMs, ACs will release maximum number of space available seats commensurate with mission requirements and safety.

2.2.2. Off-Station Training Flights. Wing commanders are the approval authority for off-station trainers. Prior to approval, commanders will carefully review each proposed trainer's itinerary to ensure it justifies and represents the best avenue for meeting training requirements. Commanders approving off-station trainers will forward a copy of the planned itinerary to the appropriate NAF DO and MAJCOM DOT.

2.3. Aircraft Commander (AC) Responsibility and Authority. An AC will be designated for all flights on the flight authorizations (AFI 11-401, *Flight Management*, and applicable MAJCOM supplements). ACs are:

2.3.1. In command of all persons aboard the aircraft.

2.3.2. Responsible for the welfare of the crew and the safe accomplishment of the mission.

2.3.3. Vested with the authority necessary to manage crew resources and accomplish the mission.

2.3.4. The final mission authority, and they will make decisions not specifically assigned to a higher authority.

2.3.5. The final authority for requesting or accepting waivers affecting the crew or mission.

2.3.6. Charged with keeping the applicable C2 or executing agencies informed concerning mission progress.

2.3.7. Responsible for ensuring only activity authorized by the executing authority is accomplished, unless emergency conditions dictate otherwise. (For example, unscheduled "bootleg" transition training is not authorized without the approval of the executing authority.)

2.4. Mission Clearance Decision. The final decision to delay a mission may be made either by the executing agency or AC when conditions are not correct to start or continue a mission. Final responsibility for the safe conduct of the mission rests with the AC. If the AC refuses a mission, the mission will not begin until the conditions have been corrected or improved so the mission can operate safely. (Another AC and aircrew will not be asked to take the same mission under the same conditions.)

2.4.1. Rerouting or diverting a mission must be authorized by the execution authority, except in an emergency or when required by en route or terminal weather conditions. The controlling agency directing the rerouting or diversion is responsible for ensuring the aircraft is compatible with departure, en route, and destination requirement and facilities. The AC will notify the appropriate command center of any aircraft or aircrew limitation that may prevent diverting or rerouting the mission.

2.4.2. When directing an aircraft to an alternate airfield, the C2 center agency will ensure the AC is provided existing and forecast weather for the alternate, notices to airmen (NOTAM), and appropriate airfield information from the aircraft suitability and restrictions report (ASRR). If the planned alternate becomes unsuitable while en route, the AC will coordinate with the C2 center for other suitable alternates. The C2 center agency will coordinate with customs and ground service agencies to prepare for arrival. The aircraft commander is final authority on selecting a suitable alternate.

2.5. Aircrew Responsibilities. The AC is the focal point for interaction between aircrew and mission support personnel; the local C2 agency is the focal point for all mission support activities. The AC must inform C2 of any factor that may affect mission accomplishment. When transiting a stop without a C2 agency, it is the AC's responsibility to ensure necessary mission information is placed into the C2 system by the most expeditious means available. The AC will establish a point of contact with the appropriate C2 agency prior to entering crew rest.

2.6. Operational C2 Reporting. TACC requires reporting by exception only. USAFE, PACAF, and Air Force Southern Command (AFSOUTH) will establish C2 reporting procedures and requirements for their OSA missions.

2.6.1. High Frequency (HF) Communications. HF is the primary means of worldwide C2 communications. For critical C2 communications (for example, aircraft waiver request), voice communications (HF, defense switching network [DSN], etc.) are the primary method.

2.6.2. Reports. Report movement information (departure, arrival, or diversion) and airlift mission recapitulation (recap) reports (number of passengers, amount of cargo, and special category information) to the appropriate C2 agencies via global HF stations. Provide relay instructions for global HF stations to pass reports to appropriate agencies. ***NOTE:*** HF transmissions will be restricted to operational traffic; for example, movement reporting, itinerary revisions, maintenance status, flight plan information, etc.

2.6.3. En Route Reporting. In CONUS, C2 agencies may advise aircrews via the controlling air traffic control (ATC) agency to establish contact when communication is needed. Refer to *FLIP* concerning global HF station procedures in contacting "MAINSAIL." Periodic "ops normal" calls or global HF station frequencies are not normally required.

2.6.4. Arrival Advisory:

2.6.4.1. Aircrews on operational missions will transmit arrival advisory to the destination C2 agency or, in the absence of a local C2 agency, to an appropriate responsible agency as soon as practical after departure. They will furnish the following information:

2.6.4.1.1. Aircraft call sign.

2.6.4.1.2. Mission number.

2.6.4.1.3. Estimated time in block (ETB).

2.6.4.1.4. Maintenance status. (For a list of maintenance status codes, see the term in **Attachment 1**)

2.6.4.1.5. Distinguished visitor (DV) status and honors codes. Transmit the DV code of each DV on board; but do not pass the name of the DV on board without his or her consent. ***NOTE:*** Outside CONUS, do not pass the name of the DV over unsecure radios.

2.6.4.2. Aircrews will transmit an ultra high frequency (UHF) or very high frequency (VHF) arrival advisory as soon as contact can be established with the destination C2 agency. The following information should be furnished:

2.6.4.2.1. Aircraft call sign.

2.6.4.2.2. Mission number.

2.6.4.2.3. ETB.

2.6.4.2.4. Maintenance status.

2.6.4.2.5. DV code and requirements. (See paragraph **2.6.4.1.5.**)

2.6.4.2.6. Number of passengers.

2.6.4.2.7. Hazardous cargo and remote parking requirements.

2.6.4.2.8. Additional service required.

2.6.4.2.9. Passengers and/or cargo capability for the next mission segment.

2.6.4.2.10. Fuel requirements.

2.6.5. DV Messages. Airborne unclassified messages originated by DV passengers may be transmitted at the AC's discretion.

2.6.6. Maintenance Discrepancy Reporting. Aircrews should transmit maintenance discrepancies (via VHF, UHF, or HF) to the destination C2 center or, in the absence of a local C2 center, to the controlling agency as soon as possible. Crews should not wait until UHF or VHF contact is established with the destination to call in this information.

2.7. C2 Agency Telephone Numbers. Units should publish a list of telephone numbers to help crews coordinate mission requirements through appropriate C2 agencies. This list should be made readily available to crews by publishing it in the flight control bulletin (FCB), read file, or other appropriate publication.

2.8. Close Watch Missions. Close Watch missions are designated missions (for example, CSAF, medevac, Phoenix Banners) that receive C2 special attention. Close Watch procedures are initiated so all possible actions are taken to ensure ontime accomplishment and notification to the user when delays occur or are anticipated. The appropriate C2 channels will be promptly notified of delays, aborts, or other events that affect ontime departure and will be advised of the estimated time in commission (ETIC), new estimated time of departure (ETD), and estimated time of arrival (ETA). Notify the C2 within 10 minutes of event and confirm that the user and OPR have been advised.

Chapter 3

CREW MANAGEMENT

3.1. Aircrew Qualification. Primary crewmembers or those occupying a primary position during flight must be qualified or in training for qualification for that crew position. If noncurrent or in training for a particular event, the crewmember must be under the supervision of an instructor while accomplishing that event (and under direct supervision for critical phases of flight). (***EXCEPTION:*** Senior staff members who have completed a senior staff familiarization course may occupy either pilot seat under direct instructor pilot (IP) supervision. These individuals will log "FP" for flight authorization duty code on the AFTO Form 781, **AFORMS Aircrew/Mission Flight Data Document.**) The following requirements apply to pilots:

3.1.1. Missions With Passengers. With passengers onboard, takeoff, climb-out, flight under actual instrument conditions, approach, and landing may be made by either the pilot or the copilot. Only a pilot that is current and qualified valid AF Form 8, **Certificate of Aircrew Qualification**) will occupy a pilot's seat with passengers onboard the aircraft. If noncurrent, a qualified mission ready (MR) pilot regaining currency may be at the controls if an IP is directly supervising and at a set of controls.

3.1.2. Touch-and-Go Landings With Passengers or Cargo. These landings are prohibited. (This does not apply to MAJCOM-approved maintenance personnel.)

3.1.3. Qualification Training. Initial qualification, requalification, or upgrade training for pilots will not be conducted on missions with passengers onboard. Mission qualification training, operational mission evaluations, and line training or development missions may be conducted on missions with passengers onboard only if the individual in training is current and qualified at the applicable level.

3.1.4. Local Training and Evaluation Missions. Noncurrent or unqualified pilots may perform crew duties under the supervision of a qualified instructor or examiner. If passengers are onboard, paragraph **3.1.1.** applies.

3.1.5. Left-Seat Training. With squadron commander approval, experienced copilots (CP) will obtain left-seat training as part of the Level II Pilot Training Guide, and they may fly in the left seat provided they are under IP supervision (or direct IP supervision for critical phases of flight and taxi operations) and no passengers are onboard. Prior to occupying the left seat on missions with passengers onboard, copilots must have completed a mission copilot or first pilot (FP) evaluation.

3.2. Crew Complement. Minimum crew complement for flight duty period (FDP) is one AC and one CP. There are no augmented CT-43 crews. The minimum crew complement for CT-43 operational missions are as follows: pilot--1; CP--1; and flight attendant (FA)--2. ***NOTE:*** Crew complement may be reduced to one mission qualified FA on missions carrying eight or less passengers with the operations group commander's approval.

3.3. Scheduling Restrictions. Crewmembers will not be scheduled to fly nor will they perform crew duties:

3.3.1. When the maximum flying time limitations of AFI 11-202, Volume 3, will be exceeded.

3.3.2. After consuming alcoholic beverages within 12 hours of takeoff or when under the influence of alcohol.

3.3.3. After consuming alcoholic beverages within the 12-hour period prior to assuming Alpha or Bravo standby force duty.

3.3.4. Within 72 hours of donating blood. The flying unit commander must approve the donation of blood by crewmembers in a mobility assignment or those who are subject to flying duties within this 72-hour period. Crewmembers should normally not donate blood.

3.3.5. When taking oral or injected medication unless an individual medical waiver has been granted by the command surgeon. Crewmembers may not self-medicate except in accordance with AFI 48-123, *Medical Examinations and Standards.* The following is a partial list of medications that may be used without medical consultation:

3.3.5.1. Skin antiseptics, topical antifungals, 1 percent hydrocortisone cream, or benzoyl peroxide for minor wounds and skin diseases that do not interfere with the performance of flying duties or wear of personal equipment.

3.3.5.2. Single doses of over-the-counter aspirin, acetaminophen, or ibuprofen to provide analgesia for minor self-limiting conditions.

3.3.5.3. Antacids for mild isolated episodes of indigestion.

3.3.5.4. Hemorrhoidal suppositories.

3.3.5.5. Bismuth subsalicylate for mild cases of diarrhea.

3.3.5.6. Oxymetazoline or phenylephrine nasal sprays. These may be used by aircrew as "get me downs" if unexpected ear or sinus block occur during flight. However, they should not be used to treat symptoms of head congestion that exist prior to flight.

3.3.6. Within 24 hours of compressed gas diving (including scuba), surface-supplied diving, or hyperbaric (compression) chamber exposure and aircraft pressurization checks exceeding 10 minutes duration.

3.3.7. Within 12 hours after completion of a hypobaric (altitude) chamber flight above 25,000 feet. Personnel may fly as passengers in aircraft during this period if the planned mission will maintain a cabin altitude of 10,000 feet mean sea level (MSL) or less. For altitude chamber flights to a maximum altitude of 25,000 feet or below, crewmembers may fly without delay as crewmembers or passengers if their cabin altitude does not exceed 15,000 feet. ***NOTE:*** Do not take off early (prior to scheduled departure time) if the early takeoff time would violate these restrictions.

3.4. Alerting Procedures. Self-alerting procedures are normally used for all missions. The AC will set the crew reporting time and location. Home-station departure show time will normally be 2 + 00 prior to scheduled takeoff time. Normally, off-station crew reporting time is no later than 2 hours prior to scheduled departure time. The AC may establish other reporting times as required for mission accomplishment; for example, scheduled mission departure time changes, increased travel time from hotel to plane, customs, etc. (***EXCEPTION:*** On en route missions, crew reporting time may be reduced to a minimum of 1 1/2 hours through coordination with the AC and controlling agency.) Aircrew release requirements are as follows:

3.4.1. On the aircrew's initial entry or reentry into crew rest, the controlling C2 agency (or AC for self-alerts) will establish an expected alert time. The crew will not be alerted or otherwise disturbed before this time except for emergencies.

3.4.2. The latest allowable alert time will be 6 hours after the expected alert time for all missions. If circumstances warrant, the AC may extend the window to a maximum of 8 hours. (When advised the crew will be making the return trip without a load [deadheading], the AC may extend the window to 12 hours.) The controlling C2 agency will not ask the aircrew to accept more than a 6-hour window.

3.4.3. If the controlling C2 agency determines a crew will not be alerted in the allowable time span, at the time of determination (but no earlier than the crew's expected alert time), the controlling C2 agency will reenter the crew into crew rest of not less than 12 hours and establish a new expected alert time.

3.4.4. When the latest allowable alert time expires without being alerted, the crew will reenter a crew rest of not less than 12 hours and the AC will contact the controlling C2 agency to determine the new expected alert time and establish a new latest-allowable alert time.

3.5. Stage Management. *(This paragraph is not used.)*

3.6. Crew Duty Time (CDT) and Flight Duty Period (FDP). CDT is the amount of time an aircrew may perform combined flight and ground duties; FDP begins when aircrew report for a mission, briefing, or other official duty. For planning purposes, CDT normally consists of FDP plus 45 minutes, not to exceed the maximum CDT. When postflight duties exceed 45 minutes, CDT is FDP plus the time required to complete the postflight-related duties.

3.6.1. CDT and FDP begin when an aircrew reports for a mission, briefing, or other official duty prior to flight-related duties. For alerts by a C2 agency, CDT and FDP are assumed to begin 1 hour after alert. Exceptions to this are as follows:

3.6.1.1. For self-alerts, CDT and FDP will begin at the scheduled or established mission reporting time.

3.6.1.2. For Alpha standby, CDT and FDP will begin when the crew is told to launch.

3.6.1.3. For Bravo standby, CDT and FDP will begin when the crew shows for duty.

3.6.1.4. For crewmembers performing other duties prior to flight-related duties, CDT and FDP will begin when they report for other duties.

3.6.1.5. For crewmembers alerted early to perform mission-related duties, CDT and FDP will begin when they report for these duties.

3.6.2. The length of FDP will be established by the mission directive or controlling C2 when the crew shows for duty and is briefed for the mission.

3.6.3. FDP ends at engine shutdown following completion of the final mission segment.

3.6.4. Normally, CDT ends 45 minutes after engine shutdown at the end of the mission. If any crewmember must perform mission-related duties past 45 minutes, CDT does not end until that crewmember completes these duties. Mission-related duties include up or down loading, servicing, debriefing, and mission planning. Except when authorized by unit commanders at home station or deployed locations, crewmembers will not be used for mission-related duties supporting other missions; that is, to preflight other aircraft. Postmission duties will not be performed after the maximum CDT has expired.

3.6.5. For crew FDP:

3.6.5.1. Maximum FDP is 16 hours. (The basic FDP is 12 hours without an operative autopilot pitch axis.)

3.6.5.2. Maximum CDT is 16 hours.

3.6.6. For augmented crew, the CT-43 does not have in-flight crew rest facilities for an augmented crew capability.

3.6.7. For training FDP:

3.6.7.1. Maximum FDP for training missions is 16 hours.

3.6.7.2. Transition duty day for training missions is 12 hours. Multiple approaches, simulated emergencies, or touch-and-go landings will not be performed after 12 hours of CDT. Transition duty day begins at the start of CDT.

3.6.8. If the autopilot fails after departure, notify the C2 center, continue to the next stop, and comply with the limitations specified in paragraph **3.6.5.1.**

3.6.9. Deadhead time is duty time for crewmembers positioning or depositioning for a mission or mission support function and not performing crew duties.

3.6.9.1. FPD plus deadhead time for crewmembers will not exceed 24-hours.

3.6.9.2. Crewmembers may perform primary crew duties after deadheading if the duties will not exceed a basic FDP for the mission to be flown beginning at the reporting time for the deadhead flight.

3.6.9.3. Crewmembers may deadhead following primary crew duties if they will not exceed a 24-hour FDP beginning at reporting time for primary crew duties.

3.6.10. After considering the safety and capability of their crew, ACs on operational missions already in execution may request an extension to their CDT or FDP by a maximum of 2 hours. The MAJCOM DO is the waiver authority. Waivers are not normally authorized for missions under the operational control of the home unit (locals). However, if a waiver is required on a local mission due to urgent situational factors, the operations group commander or equivalent is the waiver authority.

3.6.11. Flight examiners administering evaluations will not exceed basic FDP.

3.7. Crew Rest and En Route Ground Times:

3.7.1. Crewmembers will enter crew rest a minimum of 12 hours prior to alert time or, when self-alerting, 12 hours prior to reporting time.

3.7.2. All primary and deadhead crewmembers should enter crew rest 24 hours prior to alert time for missions scheduled away from home station for more than 14 hours. Crewmembers may perform limited nonflying duties, including mission planning, during the first 12 hours of this period. Deadhead crewmembers will not be manifested as passengers to reduce or eliminate crew rest requirements.

3.7.3. Crew rest normally begins 45 minutes after final engine shutdown. The 45-minute time period provides crews with time to complete normal post-flight duties. These duties include, but are not limited to, refueling, up and down loading of cargo, performing maintenance, or completing mission debriefings.

3.7.4. If any crewmember must stay at the aircraft past the 45-minute period, crew rest does not begin until post-flight duties are completed.

3.7.5. Minimum crew rest period is 12 hours. This period provides the crew a minimum of 8 hours of uninterrupted rest plus time for transportation, free time, and meals. The crew will not normally be disturbed during this period, except during emergencies. Should the 12-hour crew rest period be infringed upon by official duties, the crew will enter crew rest for an additional 12 hours on completion of the official duties.

3.7.6. A minimum 15 + 45 ground time between engine shutdown and mission takeoff should normally be planned unless extended postflight duties are anticipated. This allows for 45 minutes of postflight duties, 12 hours of rest, one hour to show, and two hours to takeoff. The time between show and takeoff may be shortened to 1 + 30, for a minimum time of 15 + 15 when requirements dictate. The controlling agency or tasking agency must coordinate this with the unit.

3.7.7. The AC may modify normal ground time as follows:

3.7.7.1. In the interest of safety.

3.7.7.2. To no less than 12 hours from the start of crew rest until mission reporting. Before reducing normal ground time consider mission preparation time, time to load cargo, and other factors peculiar to the mission. The controlling C2 agency will not ask the aircraft commander to accept less than a normal ground time. Waivers for exercises and contingencies are according to AFI 11-202, Volume 3.

3.7.7.3. To a maximum of 36 hours, when the crew has completed three consecutive near maximum FDPs.

3.7.8. Flight crews should be afforded crew rest times in excess of the minimum at en route stations, when possible, to give them the opportunity to overcome the cumulative affects of fatigue while flying on several consecutive days or transiting several time zones.

3.7.9. Postmission crew rest (PMCR) requirements are as follows:

3.7.9.1. Crewmembers returning to their home base will be given sufficient time to recover from the cumulative effects of their deployed mission and to tend to personal needs. PMCR will begin immediately on mission termination.

3.7.9.2. One hour of PMCR time (up to a maximum of 96 hours) will be provided for each 3 hours TDY when the duty exceeds 14 hours away from home-station.

3.7.9.3. The operations group commander (or acting representative) is designated PMCR waiver authority and will not delegate this authority below the operations group commander level. PMCR waivers will be limited to extraordinary circumstances only; they must not be used for day-to-day operations.

3.7.9.4. Based on mission requirements and concurrence of the affected crewmember, the unit commander may approve deferral of PMCR. Deferred PMCR will be scheduled or executed at first available opportunity, but within 30 days of mission completion. Deferred PMCR may be waived according to paragraph **3.7.9.3.**

3.7.10. Crews will reenter crew rest if their aircraft or mission (training or operational) is not capable of departure within 4 hours from scheduled takeoff time. Exceptions will be granted only with the concurrence of the AC.

3.7.11. Crew rest waivers approved for exercises and contingencies will be published in the OPord or OPlan.

3.7.12. The minimum ground time en route for a continuing mission will normally be 1 + 15. Shorter ground times may be scheduled before mission execution with the concurrence of the unit operations officer and AC.

3.7.13. For off-station missions, crew chiefs and mission essential ground personnel (MEGP) are responsible to the AC (and *only* the AC). The AC will determine how long crew chiefs and MEGPs can safely perform duties. Crew chiefs and MEGPs must have the opportunity to sleep 8 hours in each 24-hour period. See AFI 21-101, *Maintenance Management of Aircraft,* for further crew chief guidance. CDT and FDP limitations do not apply to MEGPs, crew chiefs, and other crewmembers assigned specifically to perform ground duties.

3.8. Standby Force Duty:

3.8.1. Types of Standby Forces:

3.8.1.1. Alpha Standby Force. This force is an aircraft and aircrew capable of launching in 1 hour. Crewmembers are given 12 hours of prestandby crew rest before or after aircraft preflight. Aircrews must complete all preflight duties within 6 hours of crew show time. An additional 12-hour prestandby crew rest is required when preflight time exceeds 6 hours. Once an Alpha force is formed, additional preflights may be necessary to maintain the Alpha aircraft. Additional preflights preformed during normal waking hours do not interrupt crew rest. A crew will not stay on Alpha standby duty for more than 48 hours. After 48 hours, the crew must be launched, released, or entered into predeparture crew rest. CDT and FDP begin when the crew is told to launch.

3.8.1.2. Bravo Standby Force. This force is an aircraft or aircrew capable of launching in 2 hours from the time the unit is told to launch. Crewmembers are given 12 hours of prestandby crew rest. Crews are legal for alert after prestandby crew rest. Preflight duties, if required, interrupt crew rest. A crew will not stay on Bravo standby duty for more than 48 hours. After 48 hours, the crew must be launched, released, or entered into predeparture crew rest. CDT and FDP begin when the crew shows for duty. If a crew is in preflight when the unit is tasked to launch the mission, CDT and FPD will begin when the crew first reported for that duty.

3.8.1.3. Charlie Standby Force. This force is an identified aircrew capable of entering crew rest within 2 hours after their controlling unit is notified. This aircrew would become legal for alert 12 hours after entering crew rest. Charlie alert will not exceed 72 hours. If retained for a 72-hour period, crewmembers will be released for 12 hours before resuming Charlie standby force duty, entering crew rest for mission, or entering prestandby crew rest for Alpha or Bravo standby force duty.

3.8.1.4. Wing Standby Forces. These standby forces are established by unit commanders. Crewmembers are given normal predeparture crew rest. Standby duty time is limited to 12 hours, and crews receive at least 12 hours of crew rest prior to another 12 hours of standby duty.

3.8.2. Standby Force Crew Management. Commanders will not use a standby crew to preflight other than their standby aircraft or to do any nonmission duties while on standby.

3.8.3. Poststandby Missions. On completion of standby duty, crewmembers may be dispatched on a mission. Standby duty and predeparture crew rest may be concurrent if notification is provided at least 12 hours prior to alert. If started, poststandby crew rest must be completed before the start of predeparture crew rest. If a crewmember is dispatched on a mission, the postmission crew rest time will be computed on standby time plus mission time.

3.8.4. Poststandby Crew Rest. Aircrew members not dispatched on a mission following standby duty will receive postmission standby crew rest as follows:

3.8.4.1. If standby duty is performed away from normal quarters, crew rest time is computed from this standby time on the same basis as for mission time.

3.8.4.2. If standby duty was performed in normal quarters, no crew rest time is authorized.

3.8.5. Alpha Standby Aircraft Security. Each unit will complete a maintenance and aircrew preflight inspection when they put an aircraft on Alpha standby status. The AC will ensure the aircraft is secured before entering crew rest. Secure all hatches and doors to show unauthorized entry. Close and lock the crew entrance door with a controllable device that will prevent entry without damage to the door or device. Once the plane is sealed, a person must be granted permission by the command post before entering an aircraft. A standby aircraft must be resealed any time the aircraft has been opened. The AC or designated representative must be present if access to his or her assigned aircraft is required.

3.9. Orientation Flights and Incentive Flights. Refer to DoD 4515.13-R, *Air Transport Eligibility*; AFI 11-401; and appropriate MAJCOM supplements.

3.10. Interfly:

3.10.1. The operations group commander (or as specified in MAJCOM supplement) may authorize the interfly of assigned aircrews and/or aircraft. Normally, interfly should be limited to specific operations, exercises, or special circumstances, but it may be used to relieve short-term qualified manpower shortfalls. Long-term interfly arrangements may be found in command-to-command memorandum of agreements (MOA) or similar documents. Headquarters staff or NAF evaluation or inspection teams have existing interfly arrangements.

3.10.2. Interfly is authorized under the following conditions:

3.10.2.1. Aircraft ownership will not transferred.

3.10.2.2. As a minimum, crews will be qualified in the mission design series (MDS) and model as well as the systems or configuration required to fly the aircraft and/or mission.

3.10.2.3. Crewmembers using interfly will follow "basic" operational procedures (paragraph **1.5.1.**).

3.10.2.4. Initiate an interfly approval request by memorandum or message format to the operations group commander controlling the resource. Each commander involving resources (personnel or aircraft) or the MAJCOM, if appropriate, must concur with interfly.

3.10.2.5. Request must include details of the deployment or mission including; aircrew names, duration, or special circumstances.

3.10.2.6. Flight mishap accountability will be MAJCOM designated by program element identifier (PEID) code for mishap aircraft.

3.10.2.7. Ground mishap accountability will be in accordance with AFI 91-204, *Safety Investigations and Reports*.

3.11. Off-Station Training Flights. The wing commander (through the operations group commander and in coordination with the controlling agency) is the approval authority for off-station trainers. Prior to granting approval, commanders will carefully review each proposed trainer's itinerary to ensure it justifies and represents the best avenue for meeting training requirements. Commanders approving off-station trainers will forward a copy of the planned itinerary to the appropriate NAF DO and MAJCOM DOT. Crews will forward an additional copy to TACC/XOB.

Chapter 4

AIRCRAFT OPERATING RESTRICTIONS

4.1. Objective. The ultimate objective of the aircraft maintenance team is to provide an aircraft for launch with all its equipment operational; that is, fully mission capable (FMC). Manpower limitations, skills, and spare part availability have a negative and direct impact on accomplishment. However, some redundant systems allow safe operation with less than all equipment operational for certain missions under specific circumstances. The AC determines an aircraft's overall status. The following maintenance identifiers will be used to communicate an aircraft's status:

4.1.1. Mission Essential (ME). An item, system, or subsystem component essential for safe aircraft operation or mission completion will be designated mission essential (ME) by the AC in AFTO Form 781A, **Maintenance Discrepancy and Work Document.** Include a brief explanation of the reason for ME status in the discrepancy block of the AFTO Form 781. An AC accepting an aircraft (one mission or mission segment) without an item or system does not commit that AC (or a different aircraft commander) to subsequent operations with the same item or system inoperative.

4.1.2. Mission Contributing (MC). Any discrepancies that are not currently ME, but may become ME if circumstances change, are designated as MC in the discrepancy block of the AFTO Form 781. Every effort will be made to clear the MC discrepancies at the earliest opportunity to the extent that maintenance skills, ground time, and spare part availability permit. In the AC's judgment, if mission safety would be compromised by the lack of any component, he or she may redesignate the said component as ME. However, a mission will not be delayed just to correct an MC discrepancy.

4.1.3. Open Item. Discrepancies not expected to adversely impact the current mission or any subsequent mission will not be designated MC or ME. These items will receive low priority and will normally be worked at home station. Aircraft from factories, modification centers, or depots will not be accepted unless all instruments are installed and operative.

4.1.4. Instruments. Engine performance, aircraft attitude, vertical velocity indications, altitude, speed, and heading instruments should be operative in both pilot positions. For instruments with both analog and digital displays, either the analog or digital presentation is acceptable.

4.2. Policy on Multiple Inoperative Items:

4.2.1. The AC is responsible for exercising the necessary judgment to ensure no aircraft is dispatched with multiple items inoperative that may result in an unsafe degradation and/or an undue increase in crew workload. The AC will also consider the possibility of additional failures during continued operation with inoperative systems or components. ***NOTE:*** This chapter does not allow for continued operation of the aircraft for an indefinite period with systems or subsystems inoperative.

4.2.2. It would be impractical to prepare a list that would anticipate all possible combinations of equipment malfunction and contingent circumstances. However, the minimum equipment list (MEL) lists the equipment and systems considered essential for routine as well as contingency operations. The MEL, which is actually a series of tables, does not necessarily include all equipment or systems essential to airworthiness (for example, rudder, ailerons, elevators, flaps, tires, etc.). See paragraph **4.5.** of this chapter for detailed information about the MEL and its tables. Items with a minimum requirement and no listed exceptions are grounding items.

4.2.3. If, after exploring all options, an AC determines a safe launch is possible with an item inoperable (beyond a particular restriction), he or she may request a waiver. The AC will use C2 channels to notify the appropriate execution agency of his or her intentions. A minimum 1-hour response to the waiver request should be allowed for.

4.3. Waiver Protocol. Waiver to operate with degraded equipment or waiver to Air Force policy exceeding this chapter may be granted on a case-by-case basis and only in exceptional circumstances. Waiver authority is based on "who" has operational control and execution of the aircraft performing a specific mission. The AC will determine the need for a waiver. If waiver process, authority, or protocol is in doubt, the MAJCOM DOV will be contacted.

4.3.1. Execution of Local Training Missions. Waiver authority for units flying local missions is the operations group commander or equivalent.

4.3.2. AMC-Directed Missions. Waiver authority for AMC or AMC-directed missions controlled by the AMC/TACC (and HQ AMC operational readiness inspections) is HQ AMC/DO. HQ AMC/DOV personnel are the authorized agent, and they maintain a 24-hour watch through the appropriate TACC cell (East or West).

4.3.3. Other Missions (Contingencies). Waiver authority is listed in the OPord, tasking order, etc., or the DIRMOBFOR (or equivalent) for the agency with the C2 of the aircraft. Crewmembers may request additional assistance or confirmation from their home units or the MAJCOM DOV.

4.4. Technical Assistance Service. Any time in the decision process, the AC may request technical support and additional assistance from the home unit, MAJCOM staff, or maintenance representatives.

4.4.1. ACs who elect to operate with degraded equipment or aircraft systems (with appropriate waiver) must coordinate mission requirements (for example, revised departure times, fuel requirements, maintenance requirements) with the controlling C2 agency prior to flight.

4.4.2. When it is necessary to protect the crew or aircraft from a situation not covered by this AFI and immediate action is required, the AC may deviate from the MEL and this chapter. He or she will report deviations without a waiver via RCS: AMC-DOV(AR) 9624, Report of Violations and Policy/ Procedures Waivers, through channels to appropriate MAJCOM DO within 48 hours. Units must be prepared to collect background information and submit a followup written report upon request.

4.5. Minimum Equipment List (MEL). The MEL (with its various tables) contains operational equipment and systems considered essential for safe flight. "En route" applies to locations where contract maintenance is not available. When the AC considers an item essential, but it is not covered by the MEL, that item will be treated as if it is included in a particular MEL table. The MEL does not include all of the minimum essential subsytems list (MESL) required by the maintenance contractor. MEL items are required for all CT-43 operations except as noted under the exceptions/remarks column of a particular table.

4.5.1. General. Because the requirements for operative equipment vary with specific missions, it is impossible to consider every situation or combination of situations that may exist. Therefore, the only items in the MEL are those normally expected to fail and not necessarily required for every flight. Corrections to minor discrepancies or replacement of nonessential equipment should be carried forward until capability (skills, parts, schedule) permits accomplishment without causing a scheduled

deviation. The MEL (and its tables), coupled with sound judgment, will help ACs accomplish their mission safely.

4.5.2. MEL Tables:

4.5.2.1. **Figure 4.1.** contains a list of specific MEL tables (**Table 4.1.** through **Table 4.21.**) contained in this AFI. NOTE: The various external doors, fairings, and covers have been grouped according to their effect on performance and each group has been assigned performance penalties and limitations.

4.5.2.2. Information about specific columns in the tables is as follows:

4.5.2.2.1. Column A, Equipment. Self-explanatory.

4.5.2.2.2. Column B, No. The number (quantity) of items required for dispatch. The AC may require more than the minimum listed for mission accomplishment.

4.5.2.2.3. Column C, Exceptions/Remarks. Where no exceptions are listed, the system must be operational. Where the "#" sign appears, the crew must have a predetermined plan of action in the event of emergency or subsequent failure. Refer to *FLIP* for assistance.

Figure 4.1. Tables in the Minimum Equipment List (MEL).

Name of Tables	System
4.1	Air Conditioning
4.2	Autopilot
4.3	Communications
4.4	Electrical Power
4.5	Life Support and Furnishings
4.6	Fire Protection Circuits
4.7	Flight Controls
4.8	Fuel
4.9	Hydraulic Power
4.10	Ice and Rain Protection
4.11	Flight and Voice Recorders
4.12	Landing Gear
4.13	Lights
4.14	Flight Instrument and Navigation Equipment
4.15	Oxygen
4.16	Pneumatic
4.17	Auxiliary Power Unit
4.18	Doors and Windows
4.19	Engine Fuel and Control
4.20	Ignition
4.21	Engine Indicating Systems
4.22	Thrust Reversers
4.23	Oil
4.24	Start Valves

Table 4.1. Air Conditioning.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Air conditioning systems	2	Both may be inoperative if the flight altitude is limited to 10,000 feet MSL or below, flight is unpressurized, and ram air valve system is operative. # One may be inoperative for pressurized flight if the flight altitude is limited to flight level (FL) 250 or below.
2	Pack trip warning systems	2	May be inoperative if the associated pack is not used.
3	Pack turbofans	0	May be inoperative if associated packs are operated only in flight with flaps retracted.
4	Pack ram air systems	0	May be inoperative in the FLIGHT OPEN position if: a) Operations are not conducted on runways covered with slush or on gravel runways, and b) Associated pack is not operated during takeoff or landing on wet runways or runways with standing water.
5	1) Exhaust Louver Assemblies	0	May be inoperative if: a) Actuators are disconnected, and b) Louvers are secured in the full open position.
6	Air mix valves	0	May be inoperative if the associated pack is not used.
7	Temperature indicators	0	May be inoperative if both duct overheat warning lights operate normally.
8	Duct overheat warning lights	0	May be inoperative if supply duct temperature indicators operate normally.
9	Passenger cabin temperature control system 1) Automatic/Manual Controls	1	
10	Forward Outflow Valve	0	May be inoperative closed if both packs are operative with no altitude restrictions. If inoperative open and only one pack is operative, limit altitude to FL 200 or below.
11	Equipment cooling fans	2	Limit ground time to 45 minutes with avionics powered.
12	Outflow valve position indicator	0	May be inoperative if the valve is verified to be operating.
13	Cabin rate of climb	0	May be inoperative if AUTO and STBY control modes operate normally.
14	Cabin altitude warning system	0	May be inoperative if the flight altitude remains at or below 10,000 feet MSL.
15	Cabin altitude indicator	0	May be inoperative if: a) The cabin differential pressure indicator operates normally, and b) A chart is provided to the crew to convert differential pressure to cabin altitude.

Table 4.2. Autopilot.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Autopilot systems	1	# May be inoperative. Refer to paragraph **3.6.5.1.** for reduced crew duty time.
2	Yaw damper	0	May be inoperative if the yaw damper switch remains OFF.
3	Mach trim systems	0	May be inoperative if .74 Mach is not exceeded.

Table 4.3. Communications.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Audio control panel	3	One required at pilot and copilot positions.
2	Integral amp and volume control loudspeaker (overhead speaker)	2	Not required if pilot and copilot headsets are available.
3	Oxygen mask microphone	2	One required at each occupied flight crew position.
4	Headset, PL-55 plug, interphone	2	One required at each occupied position.
5	Public address system	1	May be inoperative if cabin interphone and cabin call systems are operable and alternate normal and emergency procedures are established. Do not depart a station where repairs can be made.
6	Service interphone system (cabin to cockpit, cockpit to cabin)	1	May be inoperative if the announcement mode of the public address system is operative or cabin call system is operative.
7	VHF/UHF/HF communication systems	1	
8	Service interphone system (cabin to cockpit, cockpit to cabin)	1	As required by regulations, mission directive, or *FLIP*.
9	Cockpit voice recorder (when installed)	0	May be inoperative if the FDR operates normally.
10	Crash position indicator		In the event of malfunction or failure of the ELT system, the airplane may continue the flight (or a series of flights), but may not depart a station where repairs or replacement can be made.
11	Static dischargers	10	Two required for each wingtip, for each elevator tip, and on the vertical fin tip.

Table 4.4. Electrical Power.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Engine driven generator systems	1	One may be inoperative if the APU generator is operating and furnishing power to the bus, the APU fuel heater is installed, and **all** other components of the electrical power system are operative.
2	APU generator system	0	Except for extended range operations.
3	Engine driven generator low oil pressure/drive lights	0	May be inoperative if frequency meter and associated high oil temp light or oil temperature indicator operates normally.
4	Engine driven generator oil temperature indication systems	0	May be inoperative if frequency meter and associated low oil pressure light or high oil temp light operates normally.
5	Engine generator high oil temp lights	0	May be inoperative if frequency meter and associated low oil pressure light or oil temperature indicator operates normally.
6	Transformer rectifiers	0	Except for extended range operations, may be inoperative if: a) All DC busses and generators (including APU generator) operate normally, and b) APU generator can be electrically connected to either bus.
7	AC Volts indication	0	May be inoperative except in the STBY position.
8	AC ammeters	0	May be inoperative if associated generator off bus lights operate normally.
9	Generator off bus lights	1	One may be inoperative if the associated generator AC ammeter operates normally.
10	CSD oil temperature indicating	2	Rise function may be inoperative.
11	CSD oil pressure low annunciator		

Table 4.5. Life Support and Furnishings.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Flotation devices		Designated over-water flights require sufficient rafts and LPUs to accommodate all passengers or patients and crewmembers.
2	Flight attendant (FA) seats		May be inoperative if the FA displaced can occupy the passenger seat most accessible to the assigned exit.
3	Passenger seats (including seat backs)		May be inoperative and seat occupied secured in the up-right position if it: a) Does not block emergency exit, and b) Does not restrict any passenger from access to the main aisle, and c) Cannot be used for takeoff and landing with a back that cannot be secured up right.
4	Cabin emergency flashlight holders/flashlights		May be inoperative or missing if the crewmember assigned to the affected position has a normally operating flashlight readily available.
5	Flight crew seats	2	

Table 4.6. Fire Protection Circuits.

ITEM	A	B	C
	Equipment	**No.**	**Exceptions/Remarks**
1	Engine overheat and fire detection systems	2	One overheat detection system or one fire detection system per engine may be inoperative if the operative system is tested and operates normally before each departure.
2	APU fire detection systems	1	May be inoperative if APU is not being used.
3	Engine/APU extinguisher test systems (EXT TEXT)	0	Failure is determined to be the test circuit, and squib circuit is verified to operate normally once each flight day.
4	APU fire extinguisher discharge discs	0	Discs may be missing if the indicator reading is checked to verify proper charge.
5	Wheel well fire warning system	0	May be inoperative if the brakes are inspected and are cool to the touch before engine start.
6	APU Fire Extinguisher System	0	May be inoperative if APU is not used.
7	Wing-to-body overheat detector	0	Except for extended range operations, may be inoperative if the opposite pack is operable or APU is used as an air source, isolation valve remains closed (except for engine start), and aircraft is not operated in known or forecast icing conditions.
8	Engine fire extinguisher thermal discharge discs	0	May be missing if indicator readings or other acceptable means are used to verify adequate charge.
9	Wing-to-body overheat text system	0	May be inoperative if system integrity is verified by an acceptable procedure once each flight day.

Table 4.7. Flight Controls.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Stabilizer main electrical trim operating light	0	
2	Wing trailing edge flap position indication system	1	Left flap position indication may be inoperative if proper flap operation is verified prior to each takeoff.
3	Leading edge flap/slat position light systems	5	Indication lights on the forward panel and, in addition, indication lights for one leading edge slat on overhead annunciator panel may be inoperative if: a) Normal operation is checked by the flight mechanic before each takeoff and landing, and b) Maximum speed is limited to 300 KIAS at/below FL 200 or .65 Mach above FL 200, and c) All remaining indications on the overhead operate.
4	Flight control low pressure lights (A and B)	0	May be inoperative if warning lights, hydraulic pressure, and quantity indicators operate normally.
5	Auto spoiler system	1	May be inoperative if the system is deactivated and operations are conducted according to the flight manual.
6	Control wheel trim switches	1	Copilot's switches may be inoperative if pilot's control wheel trim switch operates normally.
7	Feel diff press light	0	May be inoperative if: a) Elevator feel system is verified to operate normally, and b) Verification is repeated each flight day.

Table 4.8. Fuel. (See note.)

ITEM	A Equipment (note)	B No.	C Exceptions/Remarks
1	Main tank fuel boost pump (main tanks): a) Aft pumps	1	One may be inoperative if: a) Both main tank forward pumps operate normally, and b) At start of takeoff, fuel quantity in associated tank is not less than 7,500 lbs, and c) A minimum fuel quantity of 2,500 lbs is maintained in the associated tank.
2	b) Forward pumps	1	One may be inoperative if: a) Both main tank aft pumps operate normally, and b) At start of takeoff, fuel quantity in associated tank is not less than 4,800 lbs, and c) A minimum fuel quantity of 1,800 lbs is maintained in the associated tank.
3	Fuel boost pumps (center tank)	1	May be inoperative if the tank remains empty.
4		1	May be inoperative with the center tank fueled if the : a) Fuel quantity remaining in main wing tanks is adequate to reach suitable airport if remaining center pump fails at any time, and b) Maximum zero fuel weight limit is reduced by the center tank fuel weight, and c) Effect on airplane balance, in the event fuel cannot be used, is accounted for, and d) Low pressure light of operating center fuel tank pump operates normally, and e) Center tank quantity indication operates normally.
5		0	May be inoperative if the: a) Center tank quantity indication operates normally, and b) Center tank remains empty, or fuel is included as part of zero fuel weight.
6	Fuel boost pump low pressure warning lights: a) Main tank pump lights	3	One may be inoperative if: a) Both pumps in the associated tank operate normally, and b) The associated tank quantity indicator operates normally.
7		2	May be inoperative for the associated inoperative pump.
8	Center tank pump lights	0	May be inoperative if the center tank quantity indicator operates normally.
9		0	May be inoperative if the center tank fuel is not required for flight.

ITEM	A Equipment (note)	B No.	C Exceptions/Remarks
10	APU fuel valve	0	Except for ER operations, may be inoperative if: a) APU is not used, and b) Valve remains closed.
11	Crossfeed valve open light	0	Except for ER operations, may be inoperative if: a) Crossfeed valve is verified to operate normally, and b) Fuel quantity indication for both main tanks operates normally.
12	Flight deck fuel quantity indicators (main tanks)	1	One may be inoperative if: a) All boost pumps in associated tank operate normally, b) Fuel flow meters operate normally, and c) Center tank indicator operates normally, and d) Flight crew periodically computes fuel remaining or checks fuel remaining against a precomputed fuel burn chart, and e) Associated fuel tank is emptied and serviced with a known quantity of fuel, and f) Fuel measuring stick readings are taken after each refueling to verify quantity in tank with inoperative indicator.
13	Flight deck fuel quantity indicator (center tank)	0	May be inoperative if: a) Both center tank boost pumps operate normally, and b) Fuel quantity in the center tank is verified by an acceptable procedure.
14		0	May be inoperative if: a) One center tank boost pump operates normally, and b) Center tank remains empty.
15	Fuel temperature indicator	0	May be inoperative if the total air temperature or ram air temperature is substituted as an indication of fuel temperature.
16	Fuel quantity totalizer	0	
17	Fueling system: 1) Pressure fueling	0	
18	2) Fueling manifold check Valves	0	May be inoperative if the associated fueling shutoff valve operates normally.
19	Fueling bay cap	2	
20	Refueling control panel quantity indicators	0	May be inoperative if fuel quantity is verified by an acceptable procedure.

ITEM	A Equipment (note)	B No.	C Exceptions/Remarks
21	Aft auxiliary fuel tank boost pumps	1	May be inoperative if the: a) Fuel quantity in other tanks is adequate to reach an alternative destination if the remaining pump fails at any time, and b) Fuel in tank is included as part of the zero fuel weight.
22		0	May be inoperative if tank remains empty.
23	Flight deck fuel quantity indicators (aft auxiliary tank)	0	Except for ER operations, may be inoperative if both boost pumps operate normally when tank is fuel.
24	Fuel measuring sticks/dipsticks	0	May be missing or broken if the fuel quantity is determined by other means.
25	Fuel quantity test switches	1	May be inoperative if affected fuel quantity indicator is verified to operate normally once each flight day.

NOTE: Requirements for forward, center, aft, and wing tank fuel boost pumps and fuel indicating systems are not applicable if the quantity of fuel in the tanks can be determined by other means or fuel from those tanks is not required.

Table 4.9. Hydraulic Power.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Ground interconnect valve (systems A and B)	0	May be inoperative if valve remains closed.
2	System B pumps	1	Except for ER operations, one may be inoperative if the: a) Pressure indicator operates normally, and b) Thrust reversers operate normally.
3	System pressure indications (A and B)	0	May be inoperative if: a) System pressure is checked from the brake pressure indicator before each departure, and b) All hydraulic low-pressure lights operate normally.
4	System A pump low pressure indication systems	1	One may be inoperative if the output of the associated pump is checked before each departure.
5	System B pump low pressure indication systems	1	One may be inoperative if the output of the associated pump is checked before each departure.
6	System B overheat lights	0	
7	Hydraulic quantity low level light (System B)	0	May be inoperative if the quantity is verified as adequate before each departure.
8	Hydraulic quantity low level light (standby system)	0	May be inoperative if the quantity is verified as adequate before each departure.
9	System A quantity indication (flight deck)	0	May be inoperative if the: a) Quantity is verified as adequate before each departure, b) System A pressure indicator operates normally, and c) System B and standby systems low quantity lights operate normally.
10	Standby system low pressure light	0	May be inoperative if the: a) Low quantity light operates normally, and b) Output of standby pump is verified before each departure, and c) Both system B pumps operate normally.
11	Hydraulic reservoir pressurization system sources	1	May be inoperative if the reservoir can be pressurized.
12	Systems A overheat lights	0	
13	Hydraulic reservoir air pressure indicator (wheel well)	0	
14	Hydraulic reservoir quantity indicator (wheel well)	0	
15	Hydraulic reservoir fill system (wheel well)	0	

Table 4.10. Ice and Rain Protection. (See note.)

ITEM	A Equipment (note)	B No.	C Exceptions/Remarks
1	Wing anti-ice valves	0	Except for ER operations, may be inoperative closed if the airplane is not operated in known or forecast icing conditions; may be inoperative open if the: a) Valve is manually closed for engine start, and b) Associated manifold is depressurized when outside temperature is above 50 ^{o}F, and c) Associated engine bleep thrust limits are followed when manifold is pressurized, and d) Air conditioning and pressurization requirements are followed when one or both manifolds are depressurized.
2	Wing anti-ice valve position lights	0	May be inoperative if the valve is verified to operate normally before operating in known or forecast icing conditions.
3	Engine and nose cowl anti-ice valves	5	Except for ER operations, one may be inoperative closed if: a) All remaining anti-ice valves operate normally, and b) The airplane is not operated in known or forecast icing conditions.
4			One may be inoperative open if: a) All thrust rating limits on the associated engine, except for takeoff and go-around, are reduced by .03 EPR, and b) En route climb limited weight is reduced by 3,000 lbs, and c) At temperatures greater than 50 ^{o}F: 1) Takeoff and landing performance limited weight is reduced by 3,000 lbs, and 2) Takeoff and go-around thrust limits on associated engine are reduced by .03 EPR, and d) All remaining valves operate normally, and e) Operating temperature for cowl valves is limited to 50 ^{o}F maximum (ambient or total air temperature) unless S/B 71-1045 or 71-1046 "Nose Cowl TAI Spray Ring Modification" or production equivalent has been incorporated.
5	Engine and nose cowl anti-ice valve position lights		May be inoperative if the valve is verified to operate normally
6			May be inoperative if the associated valve is inoperative.
7	Pitot/Static Probe Heaters a) No. 1 Aux Pitot/Static Heater (right lower probe)	0	May be inoperative if: a) No. 2 aux pitot static heater operates normally, and b) RVSM operations are not conducted, and c) Airplane is not operated in known or forecast icing conditions.
8	b) No. 2 aux/static heater (left lower probe)	0	May be inoperative if: a) No. 1 aux pitot static heater operates normally, and b) RVSM operations are not conducted, and c) Airplane is not operated in known or forecast icing conditions. May be inoperative if dispatch deviations for associated equipment are observed.

ITEM	A Equipment (note)	B No.	C Exceptions/Remarks
9	c) Pitot/static probe heaters (upper probes)	1	Pilot's or copilot's heaters may be inoperative for day VMC if the airplane is not operated in visible moisture or in known or forecast icing conditions.
10	Pitot heaters (elevator and rudder feel systems)	1	One may be inoperative if the airplane is not operated in known or forecast icing conditions.
11	Total air temperature probe heater	0	May be inoperative if the airplane is not operated in known or forecast icing conditions.
12	Stall warning system sensor heaters	0	Except for ER operations, may be inoperative if the airplane is not operated in known or forecast icing conditions.
13	Wing anti-ice duct overheat system	0	
14	Electrically heated windshields	3	One No.1 or 2 window heater may be inoperative if the: a) Airplane is not operated in known or forecast icing conditions, and b) Windshield de-fog system operates normally, and c) Airspeed is limited to 250 KIAS below 100,000 feet MSL.
15		0	No. 4 and 5 window heater may be inoperative if airspeed is limited to 250 KIAS below 10,000 feet MSL.
16	De-fog system	0	
17	Windshield wiper system	0	May be inoperative if the airplane is not operated in precipitation within 5 nautical miles (NM) of the airport of takeoff and intended landing.
18	Drain mast heaters	0	May be inoperative if the water supply to associated components is secured off.
19	Clocks	1	One may be inoperative.

NOTE: Two fully operational pneumatic systems are required for flights in icing conditions, except as specifically provided in column C.

Table 4.11. Flight and Voice Recorders.

ITEM	A Equipment	B No.	C Exception/Remarks
1	Flight data recorder system	1	
2	Voice recorder system	1	

Table 4.12. Landing Gear.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Antiskid System	0	May be inoperative if operations are conducted in compliance with applicable directions.
2	Automatic brake system	0	May be inoperative if the system is deactivated and secured.
3	Hydraulic brake pressure indicator:	0	May be inoperative if the associated flight deck brake pressure indicator operates normally.
4	a) Wheel well brake accumulator gauges		One brake indication (A or B) may be inoperative if the associated brake accumulator charge is verified as normal once each flight day.

Table 4.13. Lights.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Cockpit and instrument lighting system		# Lights are sufficient to clearly illuminate all instruments, and controls must be provided.
2	Cabin interior illumination		Lighting must be sufficient for cabin attendants to perform their duties.
3	Cargo compartment light system		May be inoperative.
4	Flight deck and instrument lighting		Individual lights may be inoperative if the remaining lights are: a) Sufficient to clearly illuminate all required instruments, controls, and other devices for which it is provided, and b) Positioned so direct rays are shielded from the flight crew's eyes, and c) Lighting configuration and intensity is acceptable to the flight crew.
5	Cabin interior illumination		Individual lights may be inoperative if sufficient lighting remains for cabin attendants' emergency egress.
6	Wing illumination lights	0	May be inoperative for day operations.
7	Landing lights	2	One may be inoperative on each side if one of the two operating lights is in the fixed position.
8	Taxi light	0	
9	Runway turnoff lights	0	
10	Position lights	4	Any except the following minimum may be inoperative for night operations: a) One stationary red wind tip bulb, and b) One stationary green wing tip bulb, and c) One stationary white tail light at each wing tip.
11			May be inoperative for day operations.
12	Exterior emergency lighting systems	0	May be inoperative for day operations.
13	Interior emergency exit lighting system	0	May be inoperative for day operations.
14	System annunciator lights		One may be inoperative for an operating system.
15			May be inoperative for an associated system.
16	Flight deck master lights test and individual light's press-to-test features		May be inoperative if the intended function of the associated lights is verified.
17	Emergency light not armed annunciator	1	May be inoperative if the circuit is, in fact, armed.
18	Nose wheel position inspection light	1	Required for night operation.
19	Main gear wheel position inspection lights	2	Required for night operation.

Table 4.14. Flight Instrumentation and Navigation Equipment.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Mach/airspeed warning systems (clacker)	2	Systems may be inoperative if both Mach indicators operate normally and 340 KIAS/.78 Mach airspeed limitations are observed.
2	Static air temperature indication	0	
3	Altimeter	1	
4	Altimeter vibrator	1	Not required for electrical mode.
5	Total air temperature indication	0	May be inoperative if an alternate air temperature indication (RAT, SAT) operates normally.
6	Standby horizon indicator	0	Except for ER operations, may be inoperative for day VMC flight only.
7	Angle of attack indicators	0	
8	Distance measurement equipment		Any excess of those required by applicable directives may be inoperative.
9	Flight director systems	0	May be inoperative if approach minimums do not require its use.
10	Turn and bank (slip) indicator:	1	
11	1) Rate of turn indicators	0	May be inoperative if standby horizon indicator operates normally.
12	Marker beacon receiver system	0	May be inoperative if approach minimums do not require its use.
13	Radio compass systems (ADF)		As mission requires.
14	Distance measuring equipment	2	May be inoperative.
15	Weather radar	1	The airplane may continue the flight (or a series of flights) if thunderstorm activity does not exceed "scattered" and can be visually circumnavigated.
16	VHF navigation systems (VOR)		Any in excess of those required for mission and not powered by Standby Bus, may be inoperative.
17	ATC transponder	1	As required by *FLIP*.
18	Radio altimeters	0	May be inoperative if approach minimums or operating procedures do not require its use. Mandatory when passengers are carried.
19	Speed command warning		
20	Inertial navigation system (INS)		
21	Radio magnetic indicators	1	
22	Global positioning system	0	May be inoperative if alternate procedures are established and used.
23	Ground proximity warning system (GPWS)	1	Mandatory when passengers are carried.

Table 4.15. Oxygen.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Crew oxygen system	1	
2	Passengers system	1	

Table 4.16. Pneumatic. (See note.)

ITEM	A Equipment (note)	B No.	C Exceptions/Remarks
1	Manifold isolation shutoff valve	0	Except for ER operations, may be inoperative if the: a) Valve remains closed except for engine start, and b) Airplane is not operated in known or forecast icing conditions.
2	Ground pneumatic connector check valve	0	Except for ER operations, may be inoperative open if the: a) Right pneumatic manifold remains depressurized after starting the right engine, and b) Airplane is not operated in known or forecast icing conditions, and c) Altitude remains at or below FL 250.
3		0	May be inoperative closed.
4	Pneumatic pressure indication system	0	May be inoperative if alternate procedures are established and used.
5	Engine bleed air shutoff valves	0	Except for ER operations, may be inoperative if the: a) Valve is secured closed after engine start, and b) Airplane is not operated in known or forecast icing conditions.
6	Duel bleed light system	0	May be inoperative if the APU bleed air is not used in flight and APU bleed valve is closed before each flight.
7	13th stage bleed air modulating and shutoff valves	0	Except for ER operations, may be inoperative if the airplane is not operated in known or forecast icing conditions.
8	Engine bleed trip off lights	0	Except for ER operations, may be inoperative if the: a) Associated engine bleed is not used except for engine start, and b) Airplane is not operated in known or forecast icing conditions.

NOTE: Two fully operational pneumatic systems are required for flight in icing conditions, except as specifically provided in column C.

Table 4.17. Auxiliary Power Unit.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	APU	1	May be inoperative provided mission not predicated on its use.
2	APU annunciator light system (includes fire, oil temperature high, and oil pressure low)	1	Required for APU operation.
3	APU fire shutoff (flight deck)	1	Required for APU operation.
4	APU fire shutoff (exterior)	1	May be inoperative if the cockpit APU fire shutoff is operative and monitored during APU operation.
5	APU exhaust gas temperature indicating system	1	Required for APU operation.
6	APU pneumatic check valve	1	Valve may fail in open position if the: a) Flight is not made in known or forecast icing conditions, and b) APU air must be used for engine start.
7	APU tachometer system	1	# Required for APU operation.
8	APU bleed load control valve	1	# May be inoperative if the valve is secured in the closed position and the bleed air control switch is not open (or opened).
9	APU air inlet door actuator	1	May be inoperative in open position to operate APU.

Table 4.18. Doors and Windows.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Forward airstairs	0	As mission requires.
2	Door warning light system	0	May be inoperative if doors are verified closed and locked.
3	Tire burst screen warning light system	0	May be inoperative if visually checked for security prior to each flight.
4	Windshields (note)	3	Outer pane may be cracked if the: a) Flight is not made in known or forecast icing, and b) Windshield heat is turned off, and, c) Inner pane not cracked.
5			Inner pane may be cracked if the: a) Defog function disabled, and b) Outer pane not cracked.

NOTE: Cracks or delaminations are acceptable on all windows if vision is acceptable as determined by the flight crew before each flight.

Table 4.19. Engine Fuel and Control.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Fuel flow indicating system	1	One may be inoperative if the N1, N2, and associated fuel quantity indicator operates normally.
2	Fuel heater timers	1	One may be inoperative if the associated fuel heater valve open light operates normally.
3	Fuel heater valves	0	May be inoperative closed if the fuel temperature is maintained at or above 32 ^{o}F.

Table 4.20. Ignition.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Ignition system, 4 Joule (low energy)	0	# May be inoperative if switching is available to permit selection of the operative high energy system for continuous ignition.
2	Ignition system, 20 Joule (high energy)	2	Except for ER operations, left igniter may be inoperative on each engine.

Table 4.21. Engine Indicating Systems.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Engine pressure ratio (EPR) indicating system	1	
2	Exhaust gas temperature (EGT) indicating system	2	
3	N1 tachometer indicating system	2	One may be inoperative if N2 and fuel flow indicating systems are operative for affected engine.
4	N2 tachometer indicating system	2	One may be inoperative if N1 and fuel flow indicating systems are operative for affected engine.

Table 4.22. Thrust Reversers.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Thrust reverser system	1	One may be inoperative if the inoperative system is deactivated.
2	Engine reverse unlock light system	1	One may be inoperative if reversers are checked for proper stow in the retracted position.
3	Engine reverse thrust light indicating system	2	Both may be inoperative if the interlock system is operative on affected engines.

Table 4.23. Oil.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Oil low pressure warning systems	0	May be inoperative if the associated oil quantity indication operates normally.
2	Quantity indicating system, engine oil	2	One or both may be inoperative if the oil quantity is checked prior to each takeoff *and* the oil pressure, oil temperature indicating, and oil pressure caution systems are operative.

Table 4.24. Start Valves.

ITEM	A Equipment	B No.	C Exceptions/Remarks
1	Caution system, L & R start valve open	2	May be inoperative if the affected valve is closed after starting.
2	Starter valves	0	May be inoperative if alternate starting procedures are established and used.

Chapter 5

OPERATIONAL PROCEDURES

5.1. Accomplishing Checklists. Accomplish all checklists with strict discipline. Normally, the pilot flying or taxiing will not read the checklist. A checklist is not complete until all items have been accomplished. Momentary hesitations for coordination items, ATC interruptions, and deviations specified in the flight manual, etc., are authorized. Notes amplifying checklist procedures or limitations may be added to the checklists (in pencil).

5.2. Duty Station. A qualified pilot will be in control of the aircraft at all times during flight. (***EXCEPTION:*** Unqualified pilots undergoing qualification training and senior staff members who have completed the Senior Staff Familiarization Course may be in control.) The AC and CP will be at their duty stations during all takeoffs, approaches, and landings. During other phases of flight, crewmembers may leave their duty station to meet physiological needs and perform normal crew duties. Only one pilot may be absent from the duty station at a time. When one pilot is out of the seat, ensure the oxygen requirements in AFI 11-202, Volume 3, are complied with.

5.3. Flight Station Entry. Passengers are not allowed in either pilot seat at any time. ACs may authorize passengers and observers access to the flight station during all phases of flight. Approved contractor maintenance personnel may perform taxi operations from either pilot seat in accordance with contract specifications and the flight manual. In all cases, sufficient oxygen sources must be available to meet the requirements of AFI 11-202, Volume 3.

5.4. Takeoff and Landing Policy. The AC will occupy either the left or the right seat during all takeoffs and landings. After thoroughly evaluating all conditions (DV status and comfort level, weather, type of approach to be flown, and crewmember experience), the AC will determine who accomplishes the takeoff and landing. The airfield suitability and restrictions report (ASRR) will be complied with. (For flights with onboard passengers, see paragraph **3.1.1.**)

5.4.1. A qualified AC will accomplish all approaches and landings under actual emergency conditions unless specific conditions dictate otherwise.

5.4.2. Except for paragraph **5.4.1.**, instructor and evaluator pilots are not restricted with regard to performing or supervising takeoffs and landings.

5.4.3. On operational missions with passengers onboard, flying circling maneuvers as close as possible to vertical flight rules (VFR) traffic pattern altitudes is preferred over practicing at circling minimums.

5.4.4. Only missions where the individual is certified as an AC and designated in command on the flight orders will be credited as missions in command. ACs will make all takeoffs and landings (unless the copilot is qualified as an AC or higher) until they complete two missions (one overseas).

5.4.5. At the discretion of the AC, first pilots may accomplish takeoffs and landings on any mission, following initial unit or theater indoctrination.

5.5. Right-Seat Procedures:

5.5.1. Normal Procedures. The pilot in the right seat will normally activate the landing gear. Flap operation will be by the pilot not flying.

5.5.2. CP Flying. The CP (right seat) will command system activation (gear or flaps). The pilot (left seat) will acknowledge the command prior to system activation. The CP will call for the appropriate checklist. The pilot will read the checklist. The CP will respond to items that require both pilots to reply. Instructor pilots may accomplish their own checklists.

5.5.3. Aborted Takeoffs. Abort responsibilities will be clearly specified in the takeoff briefing.

5.6. Outside Observer. When available, a crewmember will be used to assist in outside clearing during all taxi operations and any time the aircraft is below 10,000 feet MSL.

5.7. Seat Belts:

5.7.1. All occupants will have a designated seat with a seat belt. Use of seat belts will be as directed by the AC and flight manual. When children under age 2 are accepted as passengers, their sponsor must provide their own approved infant car seat (ICS). Passengers may hand-carry ICS. These ICSs will be secured to a seat, using the seat belt; adults will not hold ICSs during any phase of flight.

5.7.2. Crewmembers occupying pilot and CP positions will have seat belts fastened at all times in flight, unless crew duties dictate otherwise.

5.7.3. All crewmembers will be seated with seat belts and shoulder harnesses fastened during taxi, takeoff, and landing, unless crew duties dictate otherwise. Additionally, any time the seat belt advisory sign is illuminated, crewmembers will be seated with seat belt fastened, unless crew duties dictate otherwise. Crewmembers performing duties in the jump seat or passenger seats are exempt from shoulder harness requirements. ***EXCEPTION:*** Crewmembers may taxi without shoulder harnesses fastened for positioning and depositioning the aircraft.

5.8. Aircraft Lighting. This will be in accordance with AFI 11-202, Volume 3; AFI 11-218; and the flight manual.

5.9. Portable Electronic Devices: (See AFI 11-202, Volume 3.)

5.9.1. Unauthorized equipment (Walkman-type radios or tape players, CD players, etc.) will not be connected to the aircraft intercom, PA, or radio systems.

5.9.2. Portable transmitting electronic devices are prohibited. They will be turned off and properly stowed from engine start to engine shutdown. Examples are cellular phones, citizens band (CB) radios, and other transmitting, hand-held devices.

5.9.3. The following portable nontransmitting devices are permitted above 10,000 feet with authorization from the pilot in command (PIC): audio and video recorders and playback devices; computer, peripherals, and electronic entertainment devices; and radio receivers.

5.9.4. MAJCOMs may authorize subordinate units to allow the use of electronic recording equipment below 10,000 feet when required for a public affairs (PA) mission involving civilian media personnel. The following restrictions apply:

5.9.4.1. The PIC will be fully briefed on what equipment will be used and when.

5.9.4.2. Aircraft flying below 10,000 feet will maintain visual meteorological conditions (VMC) when the equipment is operating.

5.9.4.3. Any crewmember may order the equipment turned off for any reason.

5.9.4.4. The equipment must be turned off if any interference is detected by the crew.

5.9.5. Air Force organizations providing electronic support to PA will adhere to the requirements in paragraph **5.9.7.**

5.9.6. The following devices are authorized at any time: hearing aids, heart pacemakers, electronic watches, hand-held nonprinting calculators, portable tape players that do not have recording capability, and properly certified operator equipment (according to paragraph **5.9.7.**).

5.9.7. If mission requirements dictate the operation of nontransmitting portable equipment during any phase of flight or operation of a device not included in paragraph **5.9.5.**, the equipment or device must meet RE102 and CE102 requirements of MIL-STD-461E, *Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment,* or methods, when tested according to MIL-STD-461E. Technical guidance and data evaluation is available from ASC/ENAI, 2450 D Street, Suite 2, WPAFB OH 45433-7630. The PIC must be aware that this equipment is operating.

5.10. Smoking Restrictions. Smoking is prohibited onboard the aircraft.

5.11. Advisory Calls. Pilots will periodically announce their intentions when flying departures, arrivals, and approaches and when circumstances require deviation from normal procedures.

5.11.1. Mandatory altitude calls for the pilot not flying the aircraft are as follows:

5.11.1.1. Nonprecision Approaches:

5.11.1.1.1. 100 feet above minimum descent altitude (MDA).

5.11.1.1.2. "Minimums" at MDA.

5.11.1.1.3. "Runway in sight." Call when the runway environment is in sight.

5.11.1.1.4. "Go around." Call at the missed approach point if the runway environment is not in sight or the aircraft is not in a position for a safe landing.

5.11.1.2. Precision Approaches:

5.11.1.2.1. 100 feet above decision height (DH).

5.11.1.2.2. "Land." Call at DH if the runway environment is in sight and the aircraft is in a position for a safe landing.

5.11.1.2.3. "Go around." Call at DH if the runway environment is not in sight or if the aircraft is not in a position for a safe landing.

5.11.2. Climbout calls will be done at transition altitude and 1,000 feet below assigned altitude.

5.11.3. Descent calls will be done at transition level, 1,000 feet above assigned altitude, 1,000 feet above initial approach fix altitude or holding altitude, and 100 feet above procedure turn and final approach fix altitude.

5.11.4. Crewmembers will announce when heading or airspeed deviations are observed or an altitude variation of 100 feet or more.

5.12. Crew Coordination and Communications. The Air Force does not give a promise of confidentiality to aircrews regarding their recorded aircraft crew communications. Crewmembers are expected to maintain a high degree of cockpit professionalism and crew coordination at all times as follows:

5.12.1. Sterile Cockpit. Limit conversation to that essential for crew coordination and mission accomplishment during taxi, takeoff, approach, landing, and any flight below 10,000 feet MSL (except cruise).

5.12.2. Communications During Takeoff. If an unsafe takeoff condition arises before the computed V1/GO speed is reached, the crewmember observing the condition will state "ABORT." The takeoff will be discontinued in accordance with the flight manual.

5.12.3. Command Radios:

5.12.3.1. The pilot not flying the aircraft will normally make all ATC radio calls.

5.12.3.2. In terminal areas, the pilot and CP will monitor the primary command radio unless directed otherwise. One designated crewmember should monitor C2 frequencies (if applicable) on the inbound and outbound leg, unless otherwise directed.

5.12.3.3. The pilot operating command radios will inform the other pilot when the primary radio is changed.

5.12.3.4. One pilot should record and will acknowledge all ATC clearances.

5.12.3.5. Both pilots will monitor the UHF guard (or VHF guard, when appropriate) emergency frequency regardless of primary radio.

5.12.4. Crew Resource Management (CRM) Assertive Statement:

5.12.4.1. "Time out" is the common assertive statement for use by all crewmembers. The use of the "time out" statement will:

5.12.4.1.1. Provide a clear warning sign of a deviation or loss of situational awareness.

5.12.4.1.2. Provide an opportunity to break the error chain before a mishap occurs.

5.12.4.1.3. Notify all crewmembers that someone sees the aircraft or crew departing from established guidelines (the briefed scenario) or someone is simply uncomfortable with the developing conditions.

5.12.4.2. As soon as possible after a "time out" has been called, the following actions will occur:

5.12.4.2.1. Safety permitting, the aircraft will be stabilized.

5.12.4.2.2. The initiating crewmember will voice his or her concerns to the crew.

5.12.4.2.3. The AC will provide all other crewmembers the opportunity to voice inputs relative to the stated concerns. After considering all inputs, the AC will direct the aircrew to continue the current course of action or direct a new course of action. ***NOTE:*** The AC is the final decision authority.

5.13. Transportation of Pets. Transporting pets (dogs and cats) on aircraft operated by or under AMC's control, in conjunction with the sponsor's PCS, is authorized. Other pets or animals are normally prohibited, but may be moved according to DoD 4515-13R.

5.14. Alcoholic Beverages. The MAJCOM DO may authorize the dispensing of alcoholic beverages in accordance with AFI 34-219, *Alcoholic Beverage Program.*

5.15. Runway, Taxiway, and Airfield Requirements. The following weather and runway limits will be complied with:

5.15.1. Wind Restrictions. Airfields will be considered below minimums for takeoff and landing when wind components (including gusts) are greater than the following:

5.15.1.1. Maximum operating wind—50 knots.

5.15.1.2. Maximum tailwind component—10 knots.

5.15.1.3. Crosswinds—Maximum takeoff and landing crosswind components for a dry runway (runway condition reading [RCR] 23) are as prescribed by the aircraft flight manual.

5.15.2. RCR and RSC Limitations. Use RCR values as prescribed by the aircraft flight manual. If a value is not reported, use RCR 9 for wet runways and RCR 3 for icy runways. Conversions from other braking action standards to RCR should be according to applicable DoD *FLIP* documents.

5.15.2.1. For operation on wet, ungrooved runways, use the RCR corresponding to "wet" in the aircraft flight manual for all takeoff and landing data. For operations on grooved runways, use the reported RCR.

5.15.2.2. When RCR and RSC reporting is not available, flight crews will consider a runway surface as "wet" when there is sufficient water on the surface to cause a reflective glare or when rain is falling.

5.15.3. Minimum Runway Requirements:

5.15.3.1. Minimum Runway Length (General). (***NOTE:*** Lengths apply to dry surfaces only). Minimum runway length is 5,000 feet (or 1,525 meters). For touch-and-go landings, use 8,000 feet or twice the computed landing distance, whichever is greater. (For Flap 15 touch-and-goes, use 8,500 feet or twice the computed landing distance, whichever is greater.) If operationally necessary, shorter runways may be used if:

5.15.3.1.1. A qualified instructor or flight examiner makes the takeoff or landing. (***NOTE:*** MPs require the applicable operations group commander's waiver.)

5.15.3.1.2. Operations are limited to daytime. (The applicable operations group commander is waiver authority.)

5.15.3.1.3. The takeoff distance does not exceed or landing distance is less than the requirements in paragraph **5.15.3.2.1.** and **5.15.3.2.2.**

5.15.3.1.4. The runway available is not less than 4,500 feet.

5.15.3.2. Takeoff and Landing Data (TOLD) Considerations:

5.15.3.2.1. Do not attempt takeoff if the runway available is less than critical field length.

5.15.3.2.2. The minimum required runway for landing is the landing distance corrected for RCR in accordance with the flight manual. Compute the landing distance with no reverse thrust.

5.15.3.2.3. If approach end overruns are available and stressed or authorized for normal operations, they may be used to increase the runway available for takeoff. Departure end overruns (if stressed and authorized) may also be used for landing if needed.

5.15.3.2.4. Normally, takeoffs will be initiated from the beginning of the approved usable portion of the runway. The decision to make intersection takeoffs rests solely with the AC. Intersection takeoffs may be accomplished if the operating environment (for example, gross weight, obstructions, climb criteria, and/or weather) will allow a safe takeoff and departure. When less than the entire runway is used, TOLD card computations will be based on the actual runway remaining from the point at which the takeoff is initiated.

5.15.3.3. Minimum Runway Width. Minimum runway width is 80 feet. Minimum taxiway width is 49 feet or 15 meters.

5.15.4. Airfield Suitability and Restrictions Report (ASRR):

5.15.4.1. Aircrews and planning agencies will contact HQ AMC/DOVS for all questions pertaining to the airfield's weight-bearing capability and will review the ASRR prior to off-station operations.

5.15.4.2. HQ AMC/DOV is waiver authority for AMC and AMC-gained aircraft. (***EXCEPTION:*** AMC/DO is waiver authority for Guantanamo Bay, Cuba, certification requirements.) Waiver authority for AMC and AMC-gained forces chopped to USSOUTHCOM is the COMAFSOUTH or designated representative. Waiver authority for other aircraft is the assigned MAJCOM.

5.15.4.3. Waivers must be obtained prior to mission execution. Once a mission is executed, the AC is responsible for determining airfield suitability based on operational need. See summary of airfield restrictions for airfield certification requirements. ***NOTE:*** See weight bearing capacity (WBC) deviations of the ASRR for policy on operations at higher-than-published WBC.

5.15.5. Arresting Cables: (***NOTE:*** This does not include recessed cables.)

5.15.5.1. When conditions permit (aircraft gross weight, runway length, weather, winds, TOLD, etc.) and the AC has considered the potential for damaging the aircraft, takeoffs and landings will be made beyond raised cable barriers. If the AC determines the entire length of runway is needed, use it. However, be aware that operations over arresting gear cables at speeds in excess of taxi speed may result in damage to the aircraft.

5.15.5.2. Do not land on approach-end arresting cables. If the aircraft lands before the cable, the crew should contact the tower to have the cable inspected.

5.15.5.3. Do not takeoff or land over an approach end cable that has been reported as slack, loose, or improperly rigged by NOTAM, ATIS, or ATC.

5.15.6. Clearing the Runway. During operations on runways partially covered with snow or ice, takeoff computations will be based on the reported RSC or the RCR for the cleared portion of the runway. A minimum of 25 feet on either side of the center line should be cleared to ensure proper takeoff performance in the event of an engine failure. If 25 feet to either side of the center line is not cleared to the reported RSC, the RSC of the uncleared portion will be used for takeoff data computations.

5.16. Aircraft Taxi Obstruction Clearance Criteria:

5.16.1. Without a marshaler and wing walkers, avoid taxi obstructions by at least 25 feet. With a marshaler and wing walkers, avoid taxi obstructions by at least 10 feet. ***EXCEPTION:*** According to AFI 11-208, aircraft may taxi without marshalers or wing walkers at their home station along locally established taxi lines that have been measured to ensure a minimum of 10 feet clearance from any obstruction.

5.16.2. When taxi clearance is doubtful, use one or more wing walkers. If wing walkers are unavailable, deplane one or more crewmembers to maintain obstruction clearance and provide marshaling. (***NOTE:*** Both pilot and CP positions must be occupied for taxi.) Use AFI 11-218 signals. The AC should use marshalers and wing walkers or deplane an extra crewmember (if available) to act as an observer while maneuvering on narrow taxiways. During night taxi operations, marshalers should have an illuminated wand in each hand. Observers should be in a position to see wing walkers at all times and communicate to the pilot.

5.17. Foreign Object Damage (FOD) Avoidance. Crews should make every effort to minimize the potential for engine FOD as follows:

5.17.1. Carefully review airfield layout during mission planning. Be familiar with taxi routes, turn requirements, and areas for potential FOD.

5.17.2. Make sure taxi routes have been swept. If they have not been swept, consider taxiing via an alternate route.

5.17.3. Minimize power settings during taxi operations.

5.17.4. When possible, avoid 180-degree turns on taxiways. If it becomes absolutely necessary to accomplish a 180-degree turn on a narrow runway, accomplish the turn at an intersection of a link taxiway or at a designated turnaround pad.

5.18. Fuel Requirements. Standard minimum fuel requirements are as follows (AFI 11-202, Volume 3):

5.18.1. Required Ramp Fuel. This fuel will consist of all fuel required for engine start, taxi, takeoff, climb, cruise, alternate or missed approach (if required), descent, approach, transition, landing, and fuel reserve. Fuel load will be planned, using a computer flight plan (or AF Form 70, **Pilot's Flight Plan and Flight Log**) and the flight manual. ***NOTE:*** A fuel plan is not required on local training missions remaining within 200 NMs.

5.18.2. Alternate Fuel. This is fuel for flight from intended destination to alternate aerodrome at optimum altitude and normal cruise speed. Compute fuel, time, and altitude according to technical order (TO) 1T-43A-1-1, *Flight Manual--USAF Series T-43A Aircraft, Performance Data.* When holding is required in lieu of an alternate at a remote or island destination, compute holding for 1 + 15 hours using planned destination gross weight at FL 200. A remote or island destination is defined as any aerodrome which, due to its unique geographic location, offers no suitable alternate (civil or military). The forecast weather at the remote or island destination must meet the criteria listed in **Chapter 6**.

5.18.3. Required Ramp Fuel for Extended Over-Water Operations. Block-to-block fuel must be greater than or equal to fuel required to: fly to the equal time point (ETP), experience a simultaneous engine failure and loss of cabin pressure, and proceed from the ETP to a recovery field at 10,000 feet

using single engine cruise procedures. If extra fuel is required, it will be added as identified extra. ***NOTE:*** If passengers are not onboard and the crew is equipped with supplemental oxygen, the flight may be planned and flown, using recovery from the ETP at the single engine service ceiling instead of at 10,000 feet. (See paragraph **5.19.** for ETP computations.)

5.19. Computation of Equal Time Points (ETP):

5.19.1. If the flying time to a suitable alternate airfield exceeds 60 minutes (computed at 10,000 feet, single-engine cruise speed, in still air, from any point along the route of flight), computation of an ETP is required. Annotate it along the planned route of flight on the operational navigation chart (ONC) or global navigation chart (GNC).

5.19.2. The ETP will be computed according to the following formula:

$$\text{FL100 ETP (NM)} = \frac{D \times GSR}{GSR + GSC}$$

5.19.2.1. D is the distance in NMs between destination field and recovery field (not necessarily the departure field).

5.19.2.2. GSR is the average groundspeed to continue to return to a recovery field at 10,000 feet. To compute groundspeed, apply forecast headwind or tailwind component at 10,000 feet to true airspeed (TAS).

5.19.2.3. GSC is the average groundspeed to continue to destination at 10,000 feet.

5.19.2.4. Example: D = 1,040 NM, 10,000 feet winds forecast, 60 knots headwind to continue, 80 knots tailwind to return, TAS at 10,000 feet, (LRC), is 324 knots at std day, 86,000 lb gross weight (from 1-1) as follows:

$$\text{ETP} = \frac{(1040)(404)}{(404 + 264)} = 629 \text{ NM from the recovery base.}$$

NOTE: This computation will yield an ETP based on recovering or continuing at 10,000 feet. This is the most limiting case and will ensure an accurate ETP in the event of an emergency such as a rapid decompression.

5.20. Airspeed. Compute airspeed according to applicable TOs.

5.21. Bird Aircraft Strike Hazard (BASH) Programs. BASH programs are centralized unit efforts that provide information crossfeed, hazard identification, and a consolidated course of action according to AFI 91-202, *The US Air Force Mishap Prevention Program.* As a minimum, units must implement the following procedures:

5.21.1. Ensure compliance with the following bird watch condition (BWC) restrictions (AFI 91-202):

5.21.1.1. BWC - SEVERE. All takeoffs and landings are prohibited. Waiver authority is local operations group commander or equivalent. A parent MAJCOM DO waiver is required to operate at airfields not controlled by the mobility Air Force (MAF).

5.21.1.2. BWC - MODERATE. Initial takeoffs and final landings are allowed only when departure and arrival routes will avoid bird activity. Local IFR and VFR traffic pattern activity is prohibited.

5.21.1.3. BWC - LOW. There are no operating restrictions.

5.21.2. Make every effort not to schedule takeoffs, landings, and low levels from 1 hour before to 1 hour after sunrise and sunset during the Phase II period. Also, significant bird hazards will be published in *FLIP,* General Planning, and the instrument flight rules (IFR) supplement along with the associated airfield operating hour restrictions and avoidance instructions. All units will have a BASH reduction plan in accordance with AFI 91-202. Tenant flying units will work with the host base to create a plan. ***NOTE:*** When operating at airfields where no BASH program exists, ACs have the authority to delay takeoffs and arrivals due to bird conditions. Coordinate actions through appropriate command and control authority.

5.22. Functional Check Flights (FCF) and Acceptance Check Flights (ACF). FCFs and ACFs will be performed according to TO 1-1-300, *Acceptance/Functional Check Flight and Maintenance Operations Checks,* and MAJCOM 21-series instructions. Additional guidance can be found in TO 00-20-6, *Inspection System, Documentation, and Status Reporting for Ground Launched Missiles and their Trainers, SE, and Ground C-E Equipment,* and TO 1T-43A-6CF-1, *Acceptance and Functional Check Flight Checklist T-43A.*

5.22.1. FCFs are performed after accomplishing inspections or maintenance to assure the aircraft is airworthy and capable of mission accomplishment.

5.22.2. ACFs specify guidelines for accepting new production aircraft and determining compliance with contractual requirements.

5.22.3. FCF restrictions and/or requirements are as follows:

5.22.3.1. Conditions requiring an FCF include (but are not limited to) major retrofit modifications, removal or replacement of moveable flight control surfaces (except repaint), major repairs that would affect the flying characteristics of the aircraft, adjustment, removal or replacement of major components of the flight control system for which airworthiness cannot be verified by maintenance operational checks, or removal or replacement of any two engines according to TO 1T-43A-6CF-1.

5.22.3.2. The operations group commander is responsible for the wing FCF program. He or she may waive a complete FCF and authorize an FCF to check only systems disturbed by maintenance, inspection, or modification. Additional local guidance should be published in **Chapter 10** of this AFI.

5.22.3.3. Checkflights will be conducted within the designated check flight airspace of the base from which the flight was launched except when the flight must be conducted under specific conditions that are not compatible with local conditions and area restrictions.

5.22.3.4. The decision to approve a combined FCF and ferry flight is the responsibility of the MAJCOM DO. FCFs will be accomplished by the best qualified instructor or stan/eval aircrews who will be designated FCF qualified to their assigned aircrew position by the operations group commander in a memorandum.

5.22.3.5. FCFs will normally be conducted in daylight VMC conditions. However, the operations group commander may authorize a flight under a combination of VFR, IFR, and "VFR on top" conditions. The flight will begin in VFR conditions. If the aircraft and all systems are operating properly, it may proceed IFR to penetrate cloud cover to VFR on top to continue the altitude phase of the flight.

5.22.3.6. For FCF aborts, if a malfunction occurs during an FCF and is not related to the condition generating the FCF and the original condition operationally checks good, the aircraft may be released for flight.

5.22.3.7. The operations group commander and deployed mission commander may authorized temporary waivers to these FCF procedures for aircrew qualification when operationally necessary. Permanent waivers require AMC approval.

5.23. Participation in Aerial Events. Aerial events must be sanctioned and individually approved by the appropriate military authority and dated with the Federal Aviation Administration (FAA). AFI 11-209, *Air Force Participation in Aerial Events,* identifies events sanctioned for support and the approving authority for each type of event. In addition, AFI 11-209 stipulates that units participating in aerial events will ensure aerial activities are coordinated with the FAA through the regional Air Force representative.

5.24. Aircraft Recovery From Unprepared Surfaces. Aircrews will normally not attempt to recover an aircraft after it has inadvertently entered onto unprepared surfaces not suitable for taxi. Using the appropriate equipment, ground crews will accomplish aircraft recovery. Unless an emergency situation dictates otherwise, aircrews may accomplish recovery only if there is no aircraft damage, the surface will support the aircraft, and the AC has coordinated with appropriate MAJCOM headquarters maintenance authorities.

5.25. Use of Automation. All TOs, procedures, checklists, training, and supporting documents are designed to support the human operator.

5.25.1. It is the responsibility of an aircrew to fully understand the operations and limitations of the automation on the aircraft. In flight, the pilot flying will determine the most desirable level of automation for a given situation. The AC has the ultimate responsibility and authority for the safety of the aircraft, passengers, and crew. The AC must manage the workload, set priorities, and employ the available resources (including automation) to maintain overall situational awareness.

5.25.2. Appropriate levels of automation will be used as applicable to the flight conditions. The first priority is to fly the aircraft. The flight management system (FMS) and other automated systems are intended to aid in workload management, not complicate it. As the flight situation changes, do not feel locked into a level of automation.

5.25.3. The following are common pitfalls associated with overreliance, misuse, or misunderstanding of automation:

5.25.3.1. Fixating on the Automation. One pilot should always remain heads up. Establish clear roles for computer related tasks. Announce "pilot heads down" or "copilot heads down" when the task requires focusing significant attention on the mission computer in flight.

5.25.3.2. Misprioritizing Programming Tasks. Extensive reprogramming during critical phases of flight or during periods of high workload should be avoided.

5.25.3.3. Mode Awareness. The pilot flying should make FMS panel changes during coupled operations. During uncoupled flight, the PF should direct the pilot not flying to make changes to the FMS panel. Confirm all mode changes by observing the correct flight indications.

5.25.3.4. Assuming Automation is Programmed Correctly. Pilots should back up each other when making FMS panel settings or programming the FMS.

5.25.3.5. Overreliance on Automation. Practice flight operations at all levels of automation to be proficient. If the automation is not performing as expected, take over manually.

5.26. Traffic Collision Avoidance System (TCAS):

5.26.1. It is imperative to follow resolution advisories (RA) to obtain aircraft separation computed by TCAS. Failure to follow the computed RA may increase the probability of a midair collision. Visually clear the airspace before maneuvering the aircraft in response to a TCAS advisory.

5.26.2. Advise ATC as soon as practical when a deviation becomes necessary due to a TCAS RA.

Chapter 6

AIRCREW REQUIREMENTS AND PROCEDURES

Section 6A—Premission Requirements

6.1. Aircrew Uniform:

6.1.1. Wear the aircrew uniform (as outlined in AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*, and its appropriate MAJCOM supplement) on all missions unless otherwise authorized. When the DoD Foreign Clearance Guide (FCG) requires civilian attire, wear conservatively styled civilian clothing.

6.1.2. Each group commander will determine clothing and equipment to be worn or carried aboard all flights commensurate with mission, climate, and terrain involved.

6.1.3. All crewmembers will have Nomex gloves in their possession.

6.1.4. Crewmembers will remove rings and unit scarves prior to performing aircrew duties (in and around the aircraft).

6.1.5. When civilian clothing is required, men will wear a conservative suit or sport coat and tie and women will wear a conservative suit or blazer and slacks and skirt combination. Crewmembers should present a businesslike appearance, as opposed to a nicely dressed casual appearance.

6.1.6. Aircrews will fly in the designated military uniform whenever possible; however, circumstances may require exceptions. ACs will determine when civilian clothing is worn in lieu of the aircrew uniform according to these guidelines:

6.1.6.1. Civilian clothing will be worn when the FCG indicates wear of the uniform is prohibited or not recommended, when intelligence briefings give a clear indication that wearing the uniform would not be prudent, and when specifically requested by the distinguished visitor (DV) or at any other time (at the AC's discretion). ***NOTE:*** Flight attendants (FA) will wear the prescribed FA uniform during DV missions.

6.1.6.2. Crewmembers should not be required to change clothes at the aircraft under normal circumstances. If the FCG allows arrival at an airport in uniform, but requires civilian clothing when leaving the airport, civilian clothing should be worn on the mission.

6.1.7. TDY flight crews will comply with AFI 36-2903 standards at all times, including while off duty. Clothing will present a neat, conservative appearance and be appropriate for the country and/or hotel and facilities being visited. At no time will crewmembers wear clothing containing profane or obscene statements, pictures, or logos.

6.1.8. Mission essential ground personnel (MEGP) will wear the same type of clothing, military or civilian, as the rest of the aircrew. The senior MEGP will coordinate duty uniform requirements with the AC prior to mission departure.

6.2. Personal Requirements:

6.2.1. Passport. Carry a valid passport on all missions outside the 48 contiguous states. ***EXCEPTION:*** Unit commanders may authorize newly assigned personnel who have applied for, but not yet received, a passport to act as crewmembers on missions that transit locations not requiring a passport.

6.2.2. Shot Record. Ensure immunization requirements are met. Carry the shot record on all missions outside the 48 contiguous states. CT-43 crewmembers must maintain worldwide shot requirements.

6.2.3. Corrective Lenses. Comply with AFI 11-202, Volume 3.

6.2.4. Driver's License. A valid state driver's license is required on each TDY where use of US government general purpose vehicles may be required. Contact the local airfield manager if vehicle will be operated on the flight line.

6.2.5. Identification Tags. Two are required for all flights.

6.2.6. FOD Hazards. Crewmembers will not wear wigs, hair pieces, rings, ornaments, pins, clips, other hair fasteners, or earrings in the aircraft or on the flight line. ***EXCEPTION:*** Crewmembers may wear plain elastic hair fasteners and/or barrettes. These fasteners must not interfere with the wearing of headsets or the donning of oxygen equipment and will be accounted for before and after flight.

6.2.7. Hearing Protection. Hearing protection, specifically ear plugs, should be worn at all times when personnel are working around hazardous noise producing sources, including the flight station and passenger section during many portions of flight.

6.2.8. Flashlights. Each crewmember must carry an operable flashlight for night flights as defined in AFI 11-202, Volume 3.

6.2.9. Reflective Belt. A reflective belt or suitable substitute will be worn on unlit flight lines during hours of darkness or periods of reduced visibility according to AFOSH Standard 91-100, *Aircraft Flight Line - Ground Operations and Activities.*

6.3. Theater Indoctrination Training:

6.3.1. Accomplish theater indoctrination training prior to transiting the following areas: Asia, Pacific, Australia, and Indian Ocean; Africa and the Middle East; Europe, Baltics, and Russia; and the Caribbean, Central America, and South America. ***NOTE:*** Crews should receive initial unit provided orientation for their area of responsibility (AOR) and require theater indoctrination only when deploying to another area.

6.3.2. Contents of the theater indoctrination folder should be tailored to the unit's specific mission. As a minimum, the following items will be included in the folder:

6.3.2.1. Mission and deployment checklist. This is a locally developed checklist to include mobility, training, and personnel requirements to be accomplished prior to departure and personal and professional items the aircrew must take with them.

6.3.2.2. Airspace and airfield review, to include *Flip,* flight information region (fir), upper information region (uir), and air defense identification zone (adiz) procedures.

6.3.2.3. Airspace classifications, ASRR, and airport qualification videos (if available).

6.3.2.4. Theater instrument procedures, to include required instruments and/or procedures for non-DoD approaches, course reversal approaches, circling, holding, nondirectional beacon (NDB) approaches, host nation and Jeppesen approaches, and altimeter setting procedures.

6.3.2.5. Organized track systems, to include minimum navigation performance specifications (MNPS) airspace requirements and North Atlantic and Pacific Region track systems.

6.3.2.6. Communication and emergency procedures, to include C2 over-water position reporting, lost communications procedures, emergency procedures, and weather information sources.

6.3.2.7. Border clearance, to include FCG, customs, immigration, agriculture, insect and pest control, and diplomatic clearances.

6.3.2.8. Flight planning, to include DD Form 1801, **International Flight Plan, DoD,** contracted computer flight plans, Jeppesen approach plates and charts, theater weather conditions, fuel reserves and alternate requirements, ETPs and critical wind factors, reduced vertical separation minimum (RVSM) requirements, and international NOTAMs.

6.3.2.9. Special military operations, due regard, and other specified limitations.

6.3.2.10. Other regulatory requirements, to include general navigation procedures, life support equipment, hazardous cargo, crew rest and crew duty time, aircraft records and AFTO Form 781 procedures, list of mission essential ground personnel and additional crewmembers, and passenger handling.

6.3.2.11. Location information, to include C2 and reporting procedures, maintenance problems, aircraft security, social customs and taboos, billeting, and transportation.

6.4. Premission Planning. Premission planning responsibilities include, but are not limited to, the following:

6.4.1. Review tasking and itinerary. When mission confirms, contact the mission point of contact. For CT-43 flight operations, special arrangements with ARTCC may be necessary to cross the North Atlantic due to RVSM requirements.

6.4.1.1. Protection of DV foreign travel itineraries is required by DoD and Air Force policy guidance. The following procedures apply:

6.4.1.1.1. For unclassified missions operating outside the US, US possessions, or Canada, do not include the name of the DV in unclassified messages. Diplomatic clearance and advance notice messages should be sent unclassified (UNCLAS), encrypt for transmission only (EFTO), or for official use only (FOUO), as applicable.

6.4.1.1.2. Messages pertaining to DV travel solely within the US, US possessions, and Canada may include the DV party identification and will be sent UNCLAS, EFTO, or FOUO, as applicable.

6.4.1.1.3. If the mission itinerary is classified, all message traffic must be classified at the appropriate level. Confer with the mission contact officer to determine the appropriate classification. Try to keep the classification level to confidential whenever possible. All internal mission paperwork must also be classified.

6.4.1.2. ACs are responsible for arranging all en route support. For most foreign missions, arrange support through the local Defense/Air Attaché. For all CONUS missions (and as necessary for foreign missions), aircraft commanders will personally contact each destination to arrange support. When a mission or portion of a mission is canceled or changed, the AC is responsible for advising affected support agencies or attaches.

6.4.1.3. When you plan to use civilian facilities for parking or servicing, use the government contractor unless you cannot obtain the required services. If your mission requires parking away from the contractors ramp, try to obtain refueling from the designated contractor; however, do not taxi to the contractors ramp solely for refueling.

6.4.1.4. Determine if meal or beverage service is desired. Arrange for the mission FA to call the contact officer directly to coordinate cabin service requirements.

6.4.2. Review the applicable OPord and *FLIP.*

6.4.3. Review the FCG, including its classified supplement. Ensure the planned itinerary can be flown in compliance with the provisions of the FCG. Obtain visas as required. Note where visas *are* required and ensure the passport control NCO and aircrew schedulers are aware of visa requirements. Start visa processing as soon as possible and obtain necessary diplomatic clearances where required.

6.4.4. Calculate itinerary times and prepare a flight itinerary. Itinerary leg times are block-to-block times (door closed to door open) and include time for taxi-out, takeoff, climb, descent, approach, landing, and taxi-in. For planning purposes, use TASs of 420 knots for legs over 200 NM and 375 knots for legs under 200 NM. Obtain forecast wind factors or use climatology tables to compute an estimated ground speed. Apply this to the route distance, including mileage for known off-course maneuvering for standard instrument departures or departure procedures (SID/DP) and standard terminal arrival routes (STAR). Add the block time factor of 15 minutes. (This factor is adequate to account for normal vectoring delays and nominal taxi distances.) Adjust this block time factor as necessary if a procedure turn will be required or if there will be excessive taxi times. Round the total up or down to the nearest 5 minutes.

6.4.5. Plan to pre-position for DV pickups a minimum of 1+15 hours prior to the scheduled departure time. ACs may pre-position on the day prior if the crew show is 0500L or earlier, and the projected crew duty time will exceed 10 hours.

6.4.6. Obtain required customs forms.

6.4.7. Complete TDY order request forms, if required.

6.4.8. Obtain computerized flight plans (CFP) as appropriate.

6.4.9. Coordinate with combat crew communications for worldwide *FLIPs* and sufficient communications security (COMSEC) materials for the duration of the mission.

6.4.10. Review anti-hijacking procedures in AFI 13-207, *Preventing and Resisting Piracy (Hijacking),* and **Chapter 7** of this AFI.

6.4.11. Ensure physiological training, annual physical, immunizations, and standardization checks will remain current throughout the TDY period.

6.4.12. Obtain terrain charts for unfamiliar destinations, if available.

6.4.13. Compile sufficient spare forms, flight orders, etc., to cover the TDY period.

6.4.14. Release available seats to passenger terminal.

6.5. Aircrew Publications Requirements. As a minimum, ACs will carry current flight manuals, performance manuals, abbreviated checklists, AFI 11-202, Volume 3, and this AFI on all missions. All other crew positions must carry the appropriate abbreviated checklists. Group commanders may modify this requirement as long as local procedures are defined to ensure at least one crewmember other than the AC is tasked to carry the applicable current publications or the applicable current publications are maintained on board the aircraft.

Section 6B—Predeparture

6.6. Airfield Certification. Before operating missions into unfamiliar airfields, all crewmembers and staff mission planners will review airport qualification audiovisual slide tape programs (as available). In addition, aircrews will review the ASRR, and they should contact HQ AMC/DOV for updates to airfield operability. (Request waivers according to paragraph **5.15.4.** of this AFI.) The latest information is available on the AMC's web-sit (**http://amc.af.mil/do/doa/doas.htm**) or through AMC's Global Decision Support System (GDSS) or C2IPS.

6.7. Aircrew Intelligence Briefing. Prior to leaving home station on missions departing the CONUS, crews will receive an intelligence briefing that will emphasize terrorist, enemy, and friendly political and military development in the area in which they will be flying. Once in theater, aircrews should receive intelligence updates on initial arrival at a forward operating location (FOL) or en route stop and thereafter when significant developments occur. Information of possible intelligence value should be reported to the local intelligence officers at the completion of each mission.

6.8. Flight Crew Information File (FCIF) Procedures:

6.8.1. Crewmembers will review FCIF, Volume 1 (index and safety-of-flight files, as a minimum), before all missions or ground aircrew duties. They will update the FCIF currency record with the latest FCIF item number, date, and their initials (or as specified).

6.8.2. Crewmembers delinquent in FCIF review or joining a mission en route will receive an FCIF update from a primary crewmember counterpart on the mission. Instructor pilots who fly with general officers are responsible for briefing appropriate FCIF items.

6.8.3. Crewmembers not assigned or attached to the unit operating a mission will certify FCIF review by entering the last FCIF number and their initials behind their name on the file copy of the flight authorization or file copy of their crew orders.

6.9. Flight Crew Bulletins (FCB). FCBs are issued under provisions of AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program,* and MAJCOM supplements. Operations group stan/eval will be the OPR for FCBs. Items in FCBs may include local procedures and policies concerning equipment and personnel generally not found in any other publications. All crewmembers should be cognizant of FCB contents.

6.10. Airfield Security. When departing on missions destined outside the CONUS, ACs should review applicable MAJCOM security publications.

6.11. Mission Kits. Carry mission kits on all operational missions. Suggested items include: (***NOTE:*** An asterisk (*) indicates outside-CONUS missions only.)

6.11.1. AFI 23-202, *Buying Petroleum Products, and Other Supplies and Services Off-Station.*

6.11.2. AFJI 11-204, *Operating Procedures for Aircraft Carrying Hazardous Materials.*

6.11.3. ASRR (mandatory on all missions).

6.11.4. AMC Aircrew Border Clearance Guide.*

6.11.5. FCB.

6.11.6. DD Form 365-4, **Weight and Balance Clearance Form F - Transport/Tactical.**

6.11.7. DD Form 1351-2, **Travel Voucher or Subvoucher.**

6.11.8. DD Form 1351-2c, **Travel Voucher or Subvoucher (Continuation Sheet).**

6.11.9. DD Form 1854, **Customs Accompanied Baggage Declaration, U.S.***

6.11.10. DD Form 2131, **Passenger Manifest.**

6.11.11. Customs Form (CF) 7507, **General Declaration Outward/Inward.***

6.11.12. Applicable Customs forms for countries transited (for example, Japan, Korea, Singapore, etc.).

6.11.13. AF Form 15, **United States Air Force Invoice.**

6.11.14. AF Form 315, **United States Air Force AVFuels Invoice.**

6.11.15. AF Form 457, **USAF Hazard Report.**

6.11.16. AF Form 651, **Hazardous Air Traffic Report (HATR).**

6.11.17. AF Form 711, **USAF Aircraft Mishap Report Worksheet.**

6.11.18. AF Form 1297, **Temporary Issue Receipt.**

6.11.19. AMC Form 43, **AMC Transient Aircrew Comments.**

6.11.20. AMC Form 54, **Aircraft Commander's Report on Services/Facilities.**

6.11.21. MAJCOM-approved and locally generated CRM assessment sheet.

6.11.22. MAJCOM-approved and locally generated CT-43A TOLD card. (This card is mandatory; carry enough for all mission legs.)

6.11.23. Orders, including AMC Form 41, **Flight Authorization.**

6.11.24. Authentication and classified documents. Obtain and safeguard authentication and operational code documents. These documents are required for flights into an ADIZ, when specified by OPlans or theater directives or when directed by the unit commander.

6.12. Route Navigation Kits:

6.12.1. A route navigation kit will be issued at home station and will remain with the aircraft until its return. Kits will contain sufficient quantities of material to cover the planned mission and global operations as required.

6.12.2. **Table 6.1.** lists minimum contents of route navigation kits.

Table 6.1. Minimum Contents for Route Navigation Kits.

ITEM	A Item (Applicable to Area of Operation):	B Number
1	*FLIP* IFR supplement	1
2	*FLIP* flight information handbook	1
3	*FLIP* en route supplement (high and low)	1
4	*FLIP* instrument approach procedures (high and low, as appropriate, for planned theater of operation)	2
5	SIDs/DPs (for planned theater of operation)	1
6	STARs	1
7	Topographical and sectional charts for areas of operation (GNC, ONC, TPC, and JNC)	As required
8	*FLIP* VFR supplement	1
9	DoD area arrival charts	1 (if available)

6.12.3. Local area navigation kits may be used in lieu of route navigation kits on local unit training sorties. Contents of these kits will be a local unit decision.

6.13. Briefing Requirements:

6.13.1. AC's Briefing. The AC will brief crewmembers who have not previously been briefed on the specific mission details as follows:

6.13.1.1. Time hack.

6.13.1.2. Weather.

6.13.1.3. Mission itinerary and profile.

6.13.1.4. Aircraft tail number and call sign.

6.13.1.5. Aircraft gross weight and fuel load.

6.13.1.6. Communications requirements and procedures.

6.13.1.7. Fuel reserve.

6.13.1.8. Airdrome restrictions and hazards.

6.13.1.9. Emergency procedures review.

6.13.2. Weather Briefings:

6.13.2.1. Crewmembers will request a written weather briefing on DD Form 175-1, **Flight Weather Briefing,** or approved MAJCOM form. (***EXCEPTION:*** Verbal weather briefings are acceptable for local training missions.) Obtain a briefing on the current weather, trends, and fore-

cast for the proposed route, destination, and alternates. All primary crewmembers will attend the weather briefing unless crew duties dictate otherwise.

6.13.2.2. If the flight will transit non-Air Force bases, crewmembers must make arrangements to ensure adequate weather support facilities and services are available. If adequate services are not available, crews will obtain weather support through any means available to ensure required weather data is in their possession prior to mission accomplishment.

6.13.2.3. When face-to-face briefings are not possible, obtain a telephone weather briefing. (Precedence up to and including IMMEDIATE is authorized.) The designated MAJCOM regional briefing stations will provide a telephone briefing for CONUS flights.

6.13.2.4. Obtain weather information from US military weather services, any FAA-approved weather source, or any host nation civil or military weather source.

6.13.3. Buffer Zone. Prior to operating an aircraft within or adjacent to an established buffer zone, the pilot will ensure primary crewmembers are briefed on current buffer zone procedures as outlined in appropriate directives.

6.13.4. Peacetime and Wartime Safe Passage Procedures. Pilots must be familiar with the peacetime and wartime safe passage of friendly military aircraft (if applicable).

6.14. Call Signs. For training missions, CT -43 aircraft will use the unit static call sign prefix followed by a two-digit suffix assigned by the parent unit. For operational DV missions, CT-43 will use SPAR 84.

6.15. Instrument Flight Rules (IFR). Conduct flight operations under IFR to the maximum extent possible without unacceptable mission degradation. This does not prohibit VFR training to maintain proficiency in mission essential VFR operations.

6.16. Flight Data Verification:

6.16.1. Aircrews should acquaint themselves with the mission and individual sortie requirements to ensure successful mission accomplishment.

6.16.2. Contracted CFPs, CFPs available through AMC's advanced computer flight planning (ACFP) system, or approved DoD CFPs are the official sources of performance, navigation, and climatic data, including en route wind information. If stand-alone microcomputer-based plans are used, each mission segment should use the best wind data available. Only current MAJCOM-validated microcomputer programs will be used for flights involving CT-43 aircraft.

6.16.3. Flight crews may manually compute flight plans; or they may use PC-based CFPs, contracted CFPs, or CFPs provided by the staff. CFPs should be used to the maximum extent practical.

6.16.4. The flight crew has final responsibility for accuracy of the flight plan used. CFPs will be verified by the flight crew for route definition and fuel computation accuracy prior to departure.

6.16.5. TOLD will be computed using TO 1T-43A-1, *Flight Manual--USAF Series T-43 Aircraft,* and/or TO 1T-43A-1CL-1, *Pilots Abbreviated Flight Crew Checklist--USAF Series T-43 Aircraft.* All takeoff and landing data (TOLD) computations should be verified by another crewmember.

6.17. Departure Planning. Departure planning will be done in accordance with AFI 11-202 ,Volume 3; AFMAN 11-217, Volumes 1 and 2, *Instrument Flight Procedures;* this AFI; and MAJCOM supplements thereto. Further requirements are as follows:

6.17.1. Gross Weight (GW). Ensure the aircraft does not exceed the maximum gross weight, zero fuel weight, or center of gravity limitations specified in the aircraft flight manual. Gross weight may be further restricted by operating conditions such as icing, temperature, pressure altitude, runway length and slope, departure maneuvering, required climb gradients, and obstacles.

6.17.2. Departure Routing and Climbout Performance. Appropriate terrain charts must be reviewed prior to departure. Regardless of the type of departure flown (SID/DP, specific ATC departure instructions, or VFR departures), the aircraft must be able to achieve the published climb gradient (for the runway to be used) with all engines operating. The aircraft should also be able to vertically clear all obstacles within the climbout flight path with one engine inoperative. (***EXCEPTION:*** See paragraphs **6.17.4.** through **6.18.9.3.**) If no minimum climb gradient is published, use 200 feet per NM minimum with all engines operating and 152 feet per NM minimum with one engine inoperative. If a higher required climb gradient is published, use it as the minimum with *all* engines operating and use it minus 48 feet per NM as the minimum with *one* engine inoperative. This only works at a field having an instrument approach. If the field does not have an instrument approach, no obstacle survey has been conducted and you don't know if 200 or 152 feet per NM is sufficient. Therefore, at airfields with no instrument approach, an IFR departure is not authorized. In all cases, the minimum IFR engine-out climb gradient for the CT-43 is 2.5 percent.

6.17.2.1. SIDs. OPRs for SIDs will be identified on each individual SID. They will be the FAA, US Army (USA), US Navy (USN), US Marine Corps (USMC), or US Air Force (USAF).

6.17.2.2. Published IFR DPs. Published IFR DPs are available at some civil and military fields to assist in avoiding obstacles during climb to the minimum en route altitude (MEA). Airfields with published IFR DPs will have the inverted triangle with a white "T" symbol printed on the approach plates and SIDs. When using Jeppesen publications, IFR DPs will be on the airfield diagram page, which is typically on the reverse side of the airport's first approach. A climb gradient, specific routing, and/or alternate takeoff weather minimums will normally be specified with a published IFR DP. When flying a published IFR DP, depicted routing and climb gradients must be flown to avoid obstacles. The alternate takeoff weather minimums allow aircraft to depart with minimum ceiling and visibility. The CT-43 is not authorized to use these alternate takeoff weather minimums. ***NOTE:*** If the published IFR DP does not include either a routing or a minimum climb gradient (that is, it includes only alternate takeoff weather minimums), an IFR departure from that airfield IS NOT AUTHORIZED unless you fly a SID or depart via radar vectors.

6.17.2.3. Specific ATC Departure Instructions. These are specific climbout instructions or "radar vectors." Crews may depart via specific ATC departure instructions. However, the SID/DP prescribes a safe route of flight for a climb to the en route structure, while minimizing radio communication. Even if you plan to depart via specific ATC departure instructions, the crew should still have the SID/DP on board (if published).

6.17.2.4. VFR Departures. VFR departures are authorized when required for mission accomplishment. The weather at takeoff must permit a VFR climb to an IFR MEA, an appropriate IFR cruising altitude, or an altitude where radar vectors can be provided. ***NOTE:*** In no case will VFR departures be flown in lieu of obstacle clearance planning.

6.17.3. Screen Heights Requirements. From a performance computation point of view, required screen heights are, in essence, obstacles and will be treated as such in addition to any other physical obstacles for the departure. Decrease the runway available by the distance required to reach the departure end of runway (DER) at the required screen height. This distance can be computed from the climbout flight path charts in the performance manual. Use the following as a guide to determine required screen heights. ***NOTE:*** Screen height requirements for departures other than those listed below vary. There is no standard or easy way for crews to determine required screen height requirements at some airfields. Therefore, when using departures other than those listed below, plan to cross the DER at 35 feet (minimum) unless you can ascertain a different screen height requirement from the appropriate authority.

6.17.3.1. SIDs. Required screen heights depend on the SID publishing agency as follows:

6.17.3.1.1. USAF, USN, or USMC SID--zero (0) feet.

6.17.3.1.2. USA and FAA SID--35 feet.

6.17.3.1.3. Foreign civil or military SID, which must be an ICAO member nation listed in *FLIP* General Planning--16 feet.

6.17.3.2. Radar Vector, Published IFR DP, or VFR Departures:

6.17.3.2.1. USAF, USN, or USMC airfield--zero (0) feet.

6.17.3.2.2. USA or FAA civil airfield--35 feet.

6.17.3.2.3. Joint-use airfield within the US--35 feet.

6.17.3.2.4. Foreign civil or military airfield, which must be an ICAO member nation listed in *FLIP* General Planning--16 feet.

6.17.4. Climbout Performance. CT-43 climb performance is not linear. Performance manual gradients represent a snap shot view of the aircraft's climb capability at the instant the gear is fully retracted. Because aircraft climbout is *not* linear, do not equate required climb gradient to aircraft climb profile. The only way to ensure obstacle clearance is to plot all significant obstacles on the climbout flightpath charts contained in the performance manual. If there is any doubt about the aircraft's ability to clear all obstacles in the event of an engine failure, plan an engine-out visual escape route that includes the departure and emergency return routing.

6.18. Obstacle Clearance Planning. In accordance with AFI 11-202 Volume 3; AFMAN 11-217, Volumes 1 and 2; this instruction; and applicable MAJCOM supplements:

6.18.1. Begin collecting obstacle information during mission planning, prior to departing home station. Obstacle identification for SID/DP purposes (FAA Handbook 8260.3B, *Standard for Terminal Instrument Procedures,* and AFJMAN 11-226, *United States Standard for Terminal Instrument Procedures [TERPS]*) are those objects that penetrate an obstacle identification surface (OIS) of 40:1 (152 feet per NM). Calculation of the OIS on a SID/DP will continue until the SID/DP reaches an MEA or terminates. Climb gradients of 200 feet per NM will provide at least 48 feet per NM clearance above all obstacles that do not penetrate the OIS. Complying with published climb gradients found on a SID/DP will provide at least 48 feet per NM clearance above all obstacles that do penetrate the OIS (**Figure 6.1.**). The AC must be aware and thoroughly brief the crew on all obstacles along the departure flightpath.

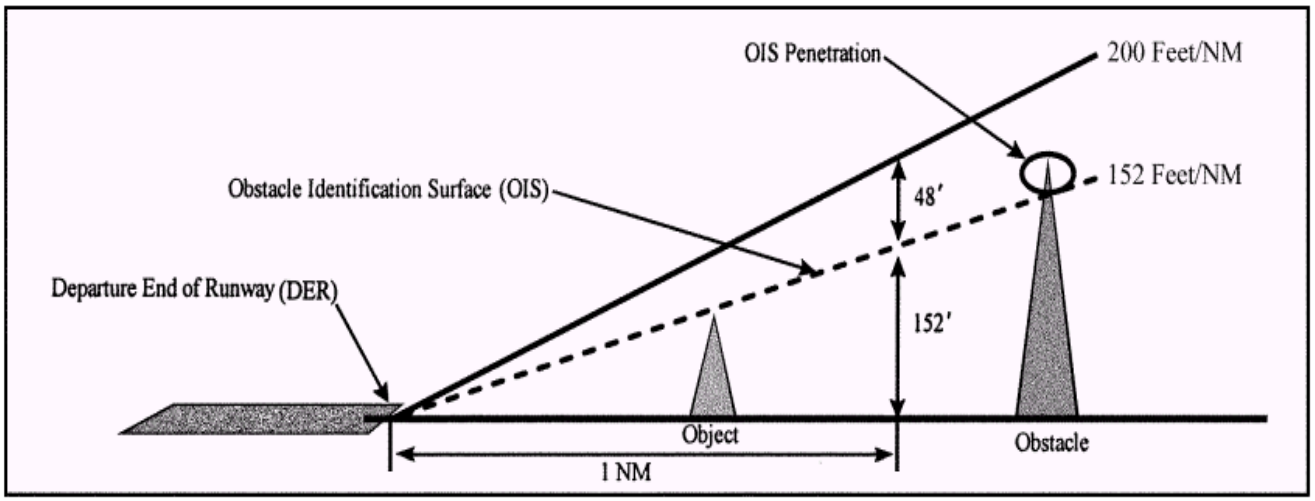
6.18.2. The AMC ASRR is an excellent source for obstacle information, but it is not a stand-alone document. It is intended to supplement published climb gradients and obstacle information found on SIDs/DPs terrain charts. Aircrews may call HQ AMC/DOAS for additional airfield obstacle data.

6.18.3. Objects that penetrate the OIS may or may not be depicted. (They definitely will not be depicted on civil procedures.) Objects that do not penetrate the OIS will normally not be depicted.

6.18.4. Although SIDs/DPs simplify ATC procedures while providing safe routing to the en route structure, they should not be used as the sole source of obstacle information for departure planning. If used as such, inadequate (engine-out) obstacle clearance may result. SIDs/DPs, instrument approach plates, and topical sectional charts must be used to determine the distance and height values for all significant obstacles along the flightpath.

6.18.5. The controlling obstacle is defined as the obstacle requiring the greatest climb gradient within the flight path. Obstacles are not normally depicted on SID/DPs when climb gradients of less than 152 feet per NM are required to clear them.

Figure 6.1. Obstacle Identification Surface (OIS).



6.18.6. In order to fly any IFR departure, aircrews must ensure they can meet the published or required climb gradient for the planned departure with all engines operating. In addition, aircrews will accomplish the following to ensure they can vertically clear all obstacles on or reasonably near the climbout or emergency return flightpath with one engine inoperative:

6.18.6.1. Use the most restrictive of the following to determine whether an engine-out climb performance is sufficient to provide obstacle clearance:

6.18.6.1.1. Using applicable obstacle height and distance information from available terrain charts (JOG, TPC, sectional), the ASRR, base operations, etc., ensure an engine-out climb performance is sufficient to vertically clear obstacles on or reasonably close to the planned departure and emergency return flight path.

6.18.6.1.2. If the climb rate is published in feet per minute, use the "60 knots" column; this is the same as feet per NM. Compare this figure with actual airplane climb capability, using the appropriate engine-out climbout chart. If actual capability is less than the required "engine out" climb rate, comply with paragraph **6.18.6.2.**

6.18.6.2. In the event the "engine-out" climb rate is not sufficient to clear all obstacles, the crew will consider downloading cargo and fuel, delaying the mission until climatological conditions allow for sufficient performance to clear all obstacles, and coordinating alternate departure procedures with the controlling agency that will provide obstacle clearance.

6.18.7. If none of the options in paragraph **6.18.6.2.** are feasible, with operations group commander (or equivalent) approval, crews may depart on an IFR departure only if all the following conditions are met:

6.18.7.1. The aircraft is capable of achieving the minimum published or required climb gradient (200 feet per NM, if none is published or required) with all engines operating.

6.18.7.2. Day VMC conditions must exist on the entire departure and planned emergency return routing.

6.18.7.3. The AC has determined through a review of all applicable maps and charts that, in the event of an engine failure, the planned departure and emergency return routing will allow for obstacle avoidance.

6.18.7.4. The planned emergency route is briefed to the entire crew.

6.18.8. In the event of an engine failure, aircrews will advise ATC if they are unable to comply with the published minimum climb. Obtain radar vector or other ATC assistance to remain well clear of all obstacles.

6.18.9. For all departures, the pilot will review the obstacle height, distance, and gradient information necessary for performance computations. As a minimum, he or she will review the appropriate terrain or sectional chart in addition to the SID/DP (if available). The following guidelines should help eliminate obstacles that are not a factor:

6.18.9.1. Consider all obstacles on the SID/DP. If no distance is published, use the appropriate aeronautical chart (if available) to estimate flying distance to depicted obstacles.

6.18.9.2. When utilizing other sources for obstacle information, consider all obstacles that fall within the departure or emergency return routing.

6.18.9.3. Always plan escape routing to ensure obstacle clearance and emergency recovery during engine failure.

6.19. Alternate Planning:

6.19.1. Choose alternates that best meet mission requirements and conserve fuel. Those selected should not be within the same terminal area, if terminal forecasts are marginal. Select alternates that are not restricted by the *FLIP,* FCG, or diplomatic clearances and are compatible with the mission load and performance characteristics of the aircraft.

6.19.2. The AC will retain the final authority in the choice of alternates. However, selection by support agencies normally should be used if they meet the criteria in paragraph **6.19.1.** and the aircraft has already been serviced.

6.19.3. Alternates selected must meet the alternate airport weather requirements according to AFI 11-202, Volume 3.

6.20. Departure Alternates:

6.20.1. A departure alternate is required if ceiling or visibility is below landing minimums for an available approach (at departure aerodrome).

6.20.2. When a departure alternate is required, the aircraft must be capable of maintaining the MEA or minimum obstruction clearance altitude (MOCA), whichever is higher, to the alternate, using one engine-out performance criteria. To qualify as a departure alternate, the airfield must meet *one* of the following conditions:

6.20.2.1. Existing weather at an alternate within 30 minutes flying time must be equal to or better than the published approach minimums and forecast to remain so until 1 hour after takeoff, but in no case forecast to be lower than 200 feet, 1/2 mile (RVR), 2400.

6.20.2.2. The existing weather at an alternate within 1 hour's flying time must be at least 500 feet and 1 mile above the lowest compatible published approach minimums, but in no case lower than 600 feet and 2 miles for a precision approach or 800 feet and 2 miles for a nonprecision approach and forecast to remain so for 1 hour after ETA at the alternate.

6.21. Destination Requirements. For filing purposes, the forecast destination weather will be according to AFI 11-202, Volume 3, and the following:

6.21.1. File two alternates when the forecast weather is less than required minimums for the lowest compatible approach *or* the forecast surface winds (intermittent or prevailing) exceed limits corrected for RCR.

6.21.2. File an alternate, regardless of forecast weather, when the departure or destination aerodrome is outside the 48 contiguous states.

6.21.3. When filing to a remote or island destination, aircrews may use 1 + 15 holding fuel (in lieu of an alternate). Compute holding fuel, using a planned destination gross weight at FL 200. A remote or island destination is defined as any aerodrome that, due to its unique geographic location, offers no suitable alternate (civil or military). The forecast weather at the remote or island destination must meet the following criteria:

6.21.3.1. The prevailing surface winds, corrected for RCR, must be within limits for landing at ETA and forecast to remain so for 2 hours thereafter, and

6.21.3.2. The prevailing ceiling and visibility must be equal to or greater than published minimums for an available nonprecision approach for ETA plus 2 hours. ***NOTE:*** If a precision approach is available, the ceiling or visibility may be intermittently below nonprecision approach minimums, but not below precision approach minimums (for ETA plus 2 hours).

6.21.4. When filing to a destination where the alternate is located in Alaska or at latitudes greater than 59 degrees, carry an additional 30 minutes of holding fuel. In this case, the minimum planned fuel

overhead planned destination would include fuel for approach or landing, alternate or missed approach, fuel reserve, and 1 + 15 holding fuel. Compute holding fuel, using planned destination gross weight at FL200.

6.22. Adverse Weather:

6.22.1. Do not take off under conditions of freezing rain or severe icing.

6.22.2. During flight, use any means available to avoid thunderstorms by at least 20 NMs at or above FL 230 or 10 NMs below FL 230. Aircrews should avoid flying in areas of recently dissipated thunderstorms and advected clouds downwind of thunderstorms. Crew actions should err on side of safety. The use of ground-based radar as a means of thunderstorm avoidance should be used only to assist in departing an inadvertently penetrated area of significant weather. It should never be considered a normal avoidance procedure.

6.22.3. Do not fly directly above (within 2,000 feet) thunderstorms or cumulonimbus clouds. If unable to vertically clear thunderstorms or cumulonimbus clouds by at least 2,000 feet, avoid them by using the above criteria. ***NOTE:*** Aircraft damage may occur 20 miles or more from a thunderstorm. Aircrews must familiarize themselves with information on thunderstorm development and hazards. Refer to AFH 11-203, Volume 1, *Weather for Aircrews*.

6.22.4. In order to minimize exposure to thunderstorm hazards when approaching or departing an airport in an area where thunderstorms are occurring or are forecast, attempt to maintain VMC and maintain at least 5 NMs separation from heavy rain showers. Thunderstorms need not be present for lightning to strike. Avoid areas of high lightning potential to the maximum extent possible (that is, clouds within plus or minus 5,000 feet and/or 8 ^{o}C of the freezing level). Refer to AFH 11-203, Volume 1. ***NOTE:*** Approaches or departures may be accomplished when thunderstorms are within 10 NMs. Thunderstorms must not be producing any hazardous conditions (such as hail, lightning, strong winds, gusts fronts, heavy rain, wind shear, or microburst) at the airport and must not be forecast or observed to be moving in the direction of the route of flight (to include the planned missed approach corridor, if applicable).

6.22.5. Aircrews performing approaches and landings at locations where temperatures are 0 ^{o}C or below will refer to the Flight Information Handbook, Section D, Temperature Correction Chart, to correct MDA, decision height, and other altitudes inside the final approach fix if required.

6.22.6. Do not fly into an area of known or forecast moderate or greater mountain wave turbulence. Crews should use good judgment when flying into any area conducive to mountain wave turbulence and avoid these areas of potential turbulence when possible as follows:

6.22.6.1. Mountain wave turbulence is normally a predictable condition. Forecasters at base weather stations, using guidance products from weather centers, can advise crews of the potential for encountering mountain wave turbulence along planned routes of flight.

6.22.6.2. Weather data availability in mountainous regions and forecast model limitations prevent the prediction of all events.

6.22.6.3. Crews must be familiar with the causes of mountain wave turbulence and the characteristic clouds that generally forewarn their presence.

6.22.7. Flight into areas of forecast or reported freezing rain, severe icing, or severe turbulence is prohibited.

6.22.8. National Weather Service in-flight weather advisories are not limiting to Air Force aircraft, but may indicate a need for the aircrew to contact a military weather facility. Crews will consider all significant meteorological information (SIGMET) valid for their aircraft until verified as not applicable with a military metro service.

6.22.9. For volcanic dust precautions, see the Aeronautical Information Manual. Plan all missions to avoid general vicinity of volcanic activity. Aircraft operation in area of forecast or known volcanic activity or dust is prohibited.

6.23. Fuel Conservation:

6.23.1. Conservation of fuel requires everyone's active participation. For every pound of excess fuel, 3 percent of the excess will be burned each hour. Use high speed cruise only when needed to satisfy the requirements of the DV.

6.23.2. Extra fuel (identified extra) may be added to the required ramp fuel load when fuel availability is limited or not available at en route stops, for known holding delays in excess of standard, or for anticipated off-course weather avoidance.

6.23.3. Planning guidelines for fuel conservation include using optimized CFPs and flying en route descents when possible.

6.23.4. Use the guidance in **Table 6.2.** when planning fuel loads for missions. ***NOTE:*** Compliance with this table will ensure fuel reserve requirements of AFI 11-202, Volume 3, are met.

Table 6.2. CT-43 Fuel Planning.

ITEM	A Fuel Load Component	B Fuel Reserve Requirements
1	Start, taxi, brake release to 250 KIAS	1,500 pounds.
2	En route (note 1)	Fuel for planned climb and cruise to overhead destination at cruise altitude or initial approach fix altitude.
3	En route reserve	Fuel for 10 percent of flight time over category 1 route. Fuel should not exceed 1 hour at normal cruise.
4	Alternate, required by paragraph **6.19.** of this AFI. (note 2)	Fuel from overhead destination to the alternate at normal speed and altitude.
	or	
5	Alternate, based on visibility-only criteria, required by paragraph **6.21.** of this AFI. (note 2)	Fuel for descent, approach, and missed approach, use 2,000 pounds + fuel from destination to alternate using climb and normal cruise charts.
6	Holding (note 3)	0 + 45 fuel using holding charts at 10,000 feet. When holding in lieu of alternate is required (paragraph **6.21.**) or when the alternate is located in Alaska or at latitudes greater than 59 degrees N/S, use a total of 1+15 holding fuel computed at 20,000 feet.
7	Approach and landing	1,000 pounds.
8	Known holding delays	Fuel for planned holding when delays are anticipated.

NOTES:

1. Include all planned off-course maneuvering for departure or en route deviations.
2. When two alternates are required, compute fuel from the destination to the most distant alternate only.
3. Minimum fuel required over destination or alternate is fuel for holding plus approach and landing or 4,000 pounds, whichever is greater.

6.23.5. Minimum landing fuel for flight planning purposes is 4,000 pounds. Plan initial arrival overhead destination with fuel for holding plus approach and landing or 4,000 pounds, whichever is greater. When dealing with unplanned contingencies, crews will still plan to touch down with a fuel reserve (minimum).

6.23.6. Add 10 percent of the fuel required to fly the Category 1 route or route segment.

6.23.7. Identified extra fuel may be added as follows:

6.23.7.1. When off-course maneuvering is anticipated.

6.23.7.2. To offset increased fuel consumption due to icing.

6.23.7.3. When destination navigation aid (NAVAID) or terminal weather forecasts are unreliable or insufficient.

6.23.7.4. For known or anticipated holding delays.

6.23.7.5. When fuel is unavailable at en route stops, compressed ground times during single-day multisortie missions prevents refueling at each en route stop, or en route refueling would delay or be detrimental to mission accomplishment.

6.23.8. Emergency fuel is 2,000 pounds. Crews will declare an emergency when it is determined they will land with emergency fuel or less.

6.23.9. When flying along a Category 1 routing, crews should ensure they have enough fuel to complete the flight from the ETP. Consider worst case recovery with one engine inoperative and unpressurized. ***NOTE:*** Crews must also ensure they have enough oxygen to continue from the ETP.

6.23.10. Units may develop standard ramp loads that meet the minimum local training mission requirements or emergency evacuation requirements, whichever is less. De-fuel will not be required if the required ramp fuel load is less than the standard ramp fuel load.

Section 6C—Preflight

6.24. AFTO Form 781, AFORM Aircrew/Mission Flight Data Document. Review AFTO Form 781 before applying power to the aircraft or operating aircraft systems. The exceptional release must be signed before flight. A maintenance officer, maintenance superintendent, or authorized civilian will normally sign the exceptional release. If one of these individuals is not available, the AC may sign it. Ensure the Air Force fuel identaplate is aboard the aircraft.

6.25. Aircraft Servicing and Ground Operations:

6.25.1. Aircraft Refueling. Aircrew members qualified in ground refueling may perform refueling duties. Crewmembers acting as refueling supervisors and panel operators will comply with TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding,* and applicable 1CT-43A-1-series TOs. Aircrews will only refuel in cases when maintenance support is not readily available and the mission would be delayed. Crewmembers may augment maintenance refueling teams at en route stops.

6.25.2. Concurrent Ground Operations. Simultaneous refueling or de-fueling while maintenance operations are being performed is authorized according to TO 00-25-172 and will be conducted according to the flight manual.

6.25.2.1. Aircrew members are authorized to enplane or deplane during fuel servicing to perform mission essential duties.

6.25.2.2. Aircrew personnel are authorized to conduct "power off" portions of inspections during servicing when essential to meet operational turnaround requirements (TO 00-25-172).

6.25.2.3. Passengers may remain onboard the aircraft during refueling if they are briefed on the hazards of the operation and given the option of deplaning prior to refueling. Passengers will not

enplane or deplane during fueling operations unless absolutely necessary and escorted by a crewmember. A standby fire truck is required (TO 00-25-172).

6.25.3. Fuel Servicing. Electric and electronic equipment should normally be turned off during refueling operations. To fill fuselage tank, comply with TO 1T-43A-1 procedures.

6.26. Aircraft Recovery Away From the Main Operating Base. When an aircraft will land at a base other than the main operating base, the AC will ensure the aircraft is turned to meet subsequent mission taskings as follows:

6.26.1. Recovery items the aircrew may be responsible for include, but are not limited to, the following:

6.26.1.1. Parking.

6.26.1.2. Aircraft servicing, including aerospace ground equipment (AGE) usage.

6.26.1.3. Minor configuration changes to meet mission tasking.

6.26.1.4. Securing the aircraft prior to entering crew rest.

6.26.1.5. Coordinating aircraft security requirements.

6.26.1.6. Maintenance of AFTO 781-series forms.

6.26.2. In all cases where aircrews turn aircraft without the assistance of a qualified maintenance specialist, the appropriate maintenance TO will be complied with.

6.26.3. Aircrews are not qualified to accomplish required ground inspections. In those instances where maintenance personnel are not available, the aircrew will enter a red dash symbol in the AFTO Form 781H, **Aerospace Vehicle Flight Report and Maintenance Document.** They will update the current status and enter a red dash symbol and a discrepancy that reflects the applicable maintenance inspection (for example, preflight, thru-flight, basic postflight) is overdue.

6.27. Oxygen Requirements. The minimum quantity of oxygen aboard an aircraft before takeoff must be sufficient to accomplish the planned flight from the ETP to recovery should oxygen be required. Calculate this requirement using the 100 percent oxygen chart in the flight manual.

6.28. Fleet Service Equipment. Ensure required fleet service items are aboard.

6.29. Crash Position Indicators (CPI) and Emergency Locator Transmitters (ELT). CPIs and ELTs must be operative for all flights except those remaining in the local area. If a CPI or ELT deploys or activates inadvertently, notify the ATC agency immediately. In the case of a deployed CPI, if the aircraft is scheduled to fly a local or is en route with no replacement airfoil available and the airplane is permitted to continue the mission, a locally manufactured airfoil should be installed over the missing CPI.

6.30. Passenger Handling. ACs are responsible for required passenger-handling duties as follows:

6.30.1. Ensure passengers are manifested and the required anti-hijacking inspections are performed. When passenger service is not available, leave a passenger manifest with a responsible ground agency prior to takeoff.

6.30.2. After the security and anti-hijacking inspection, ensure passengers are under the constant supervision of a passenger service representative or crewmember. When unable to provide constant supervision, ensure the security and anti-hijacking inspection is reaccomplished prior to boarding passengers.

6.30.3. Make every effort to enhance passenger comfort.

6.30.4. Accomplish passenger briefings according to the aircraft checklist or approved briefing guides and printed passenger information guides according to AFI 11-202, Volume 3. Ensure the use of seat belts, shoulder harnesses, and emergency equipment is briefed or demonstrated as required. Additionally, ensure passengers are notified (prior to takeoffs and landings) to fasten seat belts and harnesses, stow loose articles, put seat backs upright, etc.

6.30.5. Ensure the highest ranking DV is afforded the seat of preference and other passengers are aware of the DV status of passengers.

6.30.6. Release space-available seats to the maximum extent possible, unless restricted by the controlling agency.

6.30.7. Ensure child or infant safety seats or restraints are used in aircraft as follows:

6.30.7.1. Only the following child or infant safety seats are considered acceptable for use in all phases of air transportation: (***NOTE:*** *No other* seat or restraint is authorized.)

6.30.7.1.1. Any child or infant safety seats manufactured between 1 January 1981 and 26 February 1985 with a label stating: "This child restraint system conforms to all applicable motor vehicle safety standards."

6.30.7.1.2. Seats and restraints manufactured after 26 February 1985 with an additional label printed in red stating: "This restraint is certified for use in motor vehicles and aircraft."

6.30.7.2. Seats will be secured to a seat using the seat belt.

6.30.7.3. Adults will not hold infant seats during any phase of flight.

6.30.7.4. Acceptable child and infant safety seats or restraints may be used for takeoff, landing, or during an emergency in forward or aft facing seats *only*.

6.30.7.5. Passengers will provide acceptable child or infant safety seats for any children accompanying them.

6.30.8. Ensure all passengers are properly manifested as follows:

6.30.8.1. At locations with an AMC passenger processing activity, passengers will be manifested by air terminal or base operations personnel. At locations without an AMC passenger processing activity, aircrew personnel will manifest all passengers (using DD Form 2131, **Passenger Manifest**) and leave a copy of the form with the flight plan. If the form is not filed with the flight plan, annotate the location of the manifest on the flight plan (AFI 11-202, Volume 3).

6.30.8.2. When manifesting is accomplished by the aircrew, anti-hijacking processing will be accomplished in accordance with AFI 13-207.

6.31. Cargo Documentation. When cargo is placed aboard OSA aircraft, proper cargo documentation must accompany each cargo load. A cargo manifest is required prior to all departures with cargo aboard. If a computerized cargo manifest is not available at the manifesting station, a cargo listing will accompany

the load. The cargo or mail listing may be an abbreviated manifest, but must contain all required military standard transportation and movement procedures (MILSTAMP) data. A Shipper's Declaration for Dangerous Goods form is required for hazardous cargo, and DD Form 1387-2, **Special Handling Data/Certification,** is required for sensitive/classified cargo.

6.32. Procedures for Airlifting Hazardous Cargo. The following procedures implement AFJI 11-204:

6.32.1. The term "hazardous materials," as used in conjunction with airlift operations, applies to the following classes and types of materials (AFJMAN 24-204, *Preparing Hazardous Materials for Military Air Shipments*):

6.32.1.1. Class 1 (Explosives).

6.32.1.2. Class 2 (Compressed Gas).

6.32.1.3. Class 3 (Flammable Liquid).

6.32.1.4. Class 4 (Flammable Solid).

6.32.1.5. Class 5 (Oxidizer and Organic Peroxide).

6.32.1.6. Class 6 (Poison and Infectious Substances).

6.32.1.7. Class 7 (Radioactive Material).

6.32.1.8. Class 8 (Corrosive Material).

6.32.1.9. Class 9 (Miscellaneous Dangerous Goods).

6.32.2. CT-43 aircraft are authorized to transport the following hazardous materials (prepared and packaged according to AFJMAN 24-204):

6.32.2.1. All classes or divisions of explosives.

6.32.2.2. Class or division 2.2 nonflammable aerosols and compressed gases limited quantities.

6.32.2.3. Class or division 2.2 nonflammable high pressure spheres and canisters authorized in support of the US Air Force and DoD atmosphere research program.

6.32.2.4. Class 9 material (except magnetic material which may affect flight instruments).

6.32.2.5. Medical support equipment and supplies.

6.32.2.6. Class 8 aircraft batteries required for maintenance support or mobility requirements.

6.32.2.7. Hazardous materials accompanying Hammer Ace personnel.

6.32.2.8. Hazardous materials in "Excepted Quantities."

6.32.2.9. Consumer commodities.

6.32.3. Other classes or divisions of hazardous materials are prohibited except by a waiver approved by the operations group commander or equivalent. Items must be prepared and packaged according to AFJMAN 24-204. Waiver approval must take into consideration the lack of an onboard hazardous material spill or cleanup kit and aircraft jettisoning capability.

6.32.3.1. Waivers are not authorized for class or division 2.1 cryogenics, class or division 6.1 poisons with an inhalation hazard, class or division 2.3 toxic gases, or class 7 radioactive material (yellow III).

6.32.3.2. Request for passenger deviations are granted by the aerial port control center (APCC) or the air mobility support system (AMSS) for items coded "P4" according to AFJMAN 24-204. Passenger deviations for items coded "P3" must be granted by the MAJCOM aerial APCC.

6.32.4. The AC will be briefed by C2 center, air terminal operations center (ATOC), or APCC on the following information about hazardous materials being carried:

6.32.4.1. Hazard class.

6.32.4.2. Proper shipping name.

6.32.4.3. DoD class or division when any type explosives are involved.

6.32.4.4. Net explosives weight (NEW) for all DoD class or division 1.1, 1.2, and 1.3 explosives.

6.32.4.5. Gross weight of hazardous materials other than the explosives above.

6.32.4.6. Passenger restrictions. Written authority must be furnished to cover movement of passengers with passenger prohibited cargo identified in AFJMAN 24-204.

6.32.4.7. Written notification indicating "prior permission required," obtained from the next base to be transited.

6.32.4.8. Isolated parking and taxiing requirements.

6.32.4.9. Security classification, if appropriate.

6.32.4.10. Placard requirements.

6.32.4.11. Other special handling requirements.

6.32.5. The AC will not accept hazardous materials not manifested and/or not certified by use of a Shipper's Declaration for Dangerous Goods form prepared according to AFJMAN 24-204. (***EXCEPTION:*** An "Excepted Quantity" label will be used for items meeting the definition.) The transportation function will ensure the hazardous materials are properly packaged, marked, and labeled. The AC will contact the C2 center or ATOC concerning any question on cargo suitability for air transportation.

6.32.6. For flight planning, when briefed according to paragraph **6.32.4.**, the AC will:

6.32.6.1. Enter "Hazardous Cargo" and the mission identifier or flight number in the appropriate section of the flight plan. Refer to FCG for country specific requirements concerning overflight when transporting hazardous material. Use the Remarks section of DD Form 175, **Military Flight Plan,** and the Other Information section of DD Form 1801, as appropriate, for any quantity of class or division 1.1, 1.2, or 1.3 explosives; class or division 1.4 explosives (regardless of weight) that transit the United Kingdom, Italy, or Hawaii; and all other class or divisions of hazardous materials (except class 9 or ORM-D/consumer commodities) when shipped in quantities of 1,000 pounds or more aggregate weight.

6.32.7. If possible, plan the flight to minimize overflying heavily populated or otherwise critical areas. Approach, landing, and takeoff tracks are excluded.

6.32.8. Prepare a departure message at stations when a C2 center is not available. The Remarks section of the departure message should include the following information:

6.32.8.1. Class or division of hazardous material aboard, including NEW for explosives and gross weight for other hazardous.

6.32.8.2. Request for special handling; for example, isolated parking, security, technical escort teams, etc.

6.32.9. If estimated time en route is less than 1 hour or if other circumstances prevent timely message receipt at destination, notify the base of the first intended landing by priority telephone of the ETA and information listed in paragraph **6.32.4.** Ask the C2 center at the departure base to relay this information to base operations at the point of the first intended landing when a C2 center is available.

6.32.10. Before engine start, notify the controlling agency with parking location and approximate engine start time and verify the fire-fighting agency has the hazardous materials information. Otherwise, request the following information be relayed to the fire-fighting agency: class or division of hazardous material aboard; NEW for DoD class or division 1.1, 1.2, and 1.3 explosives; and ETD.

6.32.11. Normal procedures apply en route.

6.32.12. Before landing, unless specifically prohibited by the theater commander of *FLIP*, General Planning, contact the agency specified in *FLIP*, base operations dispatcher, control tower, or approach control at least 30 minutes (or as soon as practical) before ETA to announce that hazardous materials are aboard. Transmit the mission number, ETA, and information in paragraph **6.32.4.** Request the information be relayed immediately to the base operations or civil airport manager, crash and fire protection agency, and other support activities. If landing at a CONUS civil airport without a tower, give the above information to the nearest FAA flight service station.

6.32.13. DoD requires aircraft carrying DoD class or division 1.1 or 1.2 explosives be parked in areas isolated from nonassociated personnel and facilities. When such cargo is aboard, ACs are responsible for ensuring cargo is correctly identified to the tower or ground control. When aircraft are not directed to an isolated area, identify the cargo again to tower or ground control. When identification is acknowledged, the host is solely responsible for selecting the parking area. Should host procedures be questionable, submit trip reports or hazard reports as appropriate to document such occurrences. The host base may direct isolated parking for other hazardous materials according to local procedures.

6.32.14. The military host is responsible for placarding aircraft. When missions operate on nonmilitary bases, the briefing to the AC will include placarding requirements, and placards will be furnished at the onload base if required. The shipper and receiver must make prior arrangements with the airport manager of shipments for hazardous materials requiring placarding. The shipper and receiver are responsible for cargo identification, fire fighting procedures, and isolated parking requirements.

6.33. Handling of Classified Cargo; Registered Mail; Nonmission Capable Supply (NMCS), Very Very Important Part (VVIP), and Forward Supply System (FSS) Shipments; and Courier Material:

6.33.1. These shipments are normally not carried on CT-43 passenger aircraft. ACs may accept or decline shipments at their discretion based on mission requirements and crew or aircraft capabilities. Receipts will be obtained for classified cargo; NMCS, VVIP, and FSS shipments; and registered mail at the on-load and off-load station using the cargo manifest.

6.33.2. Defense Courier Service (DCS) couriers, in coordination with the AC, are authorized to designate officer or enlisted (E-5 and above) crewmembers on military aircraft as couriers to escort and safeguard courier material when other qualified personnel are not available. Qualified passengers will be designated prior to designating crewmembers. The following restrictions apply:

6.33.2.1. Primary crewmembers will not be designated without the AC’s consent.

6.33.2.2. Crewmembers on aircraft scheduled to stop at locations where DCS couriers cannot provide en route support will not be designated as couriers. This does not relieve the AC of the responsibility for urgent (life and death) shipments.

6.33.3. During stops at en route locations supported by DCS stations, DCS couriers are required to meet designated couriers to protect the material. During unscheduled stops, crewmembers may place courier material in temporary custody of the following agencies (listed in descending order of priority):

6.33.3.1. DCS courier.

6.33.3.2. Top Secret control officer of the US armed forces.

6.33.3.3. US Department of State diplomatic courier.

6.33.3.4. US Department of State activity.

6.33.3.5. US military guards.

6.33.3.6. US DoD civilian guards.

6.33.4. If unable to follow the itinerary to the destination of the courier material or if material is lost, stolen, or otherwise compromised, report circumstances to the nearest armed forces courier station and notify the local US military commander or US government activity.

Section 6D—Departure Procedures (DP)

6.34. Crew Stations Times. Crewmembers will normally be at their duty stations with all checklists accomplished (up to the point of engine start) not later than 30 minutes prior to departure. If the DV arrives early, crewmembers will be prepared to depart as expeditiously as is safely possible.

6.35. On-Time Takeoffs. Mission departures are on time if the aircraft is airborne within -20 to +14 minutes of scheduled takeoff time. The following applies for *early* departures:

6.35.1. Home Station. An early departure at home station is authorized to prevent a delay due to weather, ATC restrictions, or airfield or aircraft operational limitations; to adjust mission flow during a large scale operation; or if approved through C2 center.

6.35.2. En Route Stations. An early departure at an en route station may be authorized through C2 center, if the impact on local and downrange facilities and crew duty has been evaluated.

6.36. Cabin Security Procedures During Takeoff and Landing. The following procedures should be followed for takeoffs and landings:

6.36.1. The flight attendant (FA) should assure all carryon luggage and supplies are secured as soon as possible after boarding passengers. Ensure all passenger carryon baggage is stowed to prevent a hazard during emergency landings; for example, blocking an exit or emergency equipment. Notify the AC when excessive topside luggage prevents safe stowage.

6.36.2. Before beginning any cabin service prior to takeoff, the first FA will coordinate with the AC the anticipated taxi time.

6.36.3. The first FA should notify the flight deck crew that the cabin is secure prior to being seated for takeoff or landing. The cockpit crew should confirm the cabin security report prior to takeoff and landing.

6.37. Weather Minimums for Takeoff. See **Table 6.3.**

Table 6.3. Weather Minimums for Takeoff.

ITEM	A Mission	B Visibility (notes 1 and 2)	C Remarks
1	Operational	RVR 1,000	When less than RVR 1,600, but equal to or greater than RVR 1,000, the crew may take off if the runway has dual RVR readouts and displays (minimum RVR 1,000 on both) and the runway center line lighting is operational. For any takeoff below 1,600 RVR, the crew must be fully qualified.
2	All others	RVR 1,600	For runways with more than one operating RVR readout, the RVR must read 1,600 minimum on all readouts.

NOTES:

1. If no RVR readout is available for the departure runway, visibility must be reported to be 1/2 mile (800 meters).
2. When weather is below approach and landing minimums (ceiling or visibility), a takeoff alternate is required (paragraph **6.20.**).

Section 6E—En Route Procedures

6.38. Flight Progress:

6.38.1. Prior to flight on over-water missions, plot the oceanic portion of the flight on an appropriate chart. Annotate the chart with the mission number, AC's name, preparer's name, and date. If practical, the chart may be reused.

6.38.2. Any time the FMS NAVAID or waypoint database is not current or a pilot-defined waypoint will be used for navigation, two pilots will verify the NAVAID or waypoint information prior to its selection as the active waypoint. Check both the coordinate information and the distances between waypoints against the flight plan.

6.38.3. In flight, use all available NAVAIDs to monitor FMS performance. Immediately report malfunctions or any loss of navigation capability that degrades center line accuracy to the controlling ARTCC. Use the following procedures for flight progress:

6.38.3.1. Obtain a coastout fix prior to, or immediately on, entering the Category I route or over-water segment. Perform a gross error check using available NAVAIDs and annotate the position and time on the chart.

6.38.3.2. When approaching each waypoint, recheck coordinates for the next waypoint.

6.38.3.3. Approximately 10 minutes after passing each oceanic waypoint, record and plot the aircraft position and time on the chart and ensure compliance with courses and ETA tolerances.

6.38.3.4. If a revised clearance is received, record and plot the new route of flight on the chart.

6.38.4. US military aircraft and DoD personnel entering another nation to conduct US government business therein must have the approval of the foreign government concerned to enter their airspace. (See *FLIP*, FCG, Area Planning, and MDS series instruction for further guidance.) Foreign clearances for US international air operations will be obtained through US officials known as defense attaché officers. Refer to *FLIP*, General Planning, for discussion of international strait passage, archipelagic sea lane passage, procedures to follow if intercepted, and other foreign sovereignty issues.

6.38.4.1. There are essentially two types of airspace, international airspace and territorial airspace. International airspace includes all airspace seaward of coastal states' territorial seas. Military aircraft operate in such areas free of interference or control by the coastal state. Territorial airspace (sovereign airspace) includes airspace above territorial seas, archipelagic waters, inland waters, and land territory. Overflight may be conducted in such areas only with the consent of the sovereign country.

6.38.4.2. Consistent with international law, the US recognizes sea claims up to 12 NMs. Diplomatic constraints and/or a lack of diplomatic clearances usually result in missions operating in international airspace. Because of this, it is imperative that sufficient information be provided far enough in advance to allow compliance with FCG requirements established by the countries concerned. The US does not normally recognize territorial claims beyond 12 NMs; however, specific guidance from certain US authorities may establish limits that differ from the standard.

6.38.4.3. A flight information region (FIR) is defined as an area of airspace within which flight information and related services are provided. An FIR does not reflect international borders or sovereign airspace. Aircraft may operate within an established FIR without approval of the adjacent country, if the AC avoids flight in sovereign airspace.

6.38.4.4. Aircrews on a flight plan route that takes them from international airspace into territorial airspace for which approved aircraft clearances were obtained should not amend entry points.

6.38.4.5. Violations of foreign sovereignty result from unauthorized or improper entry or departure of aircraft. Aircrews should not enter into territorial airspace for which a clearance has not been duly requested and granted through diplomatic channels.

6.38.4.6. Where prior clearance is required from the respective country, ATC agencies are not vested with the authority to grant diplomatic clearances for penetration of sovereign airspace. Aircraft clearances are obtained through diplomatic channels only.

6.38.4.7. If ATC agencies challenge the validity of a flight routing or attempt to negate existing clearances, pilots must evaluate the circumstances. The normal response will be to attempt to advise the ATC agency that the aircraft will continue to a planned destination as cleared in international airspace. (The key phrase is "in international airspace.") Safety of flight is paramount in determining mission continuation. Under *no* circumstances should aircrews construe a clearance that routes their mission over sovereign airspace, but was *not* approved through diplomatic channels prior to mission departure, as being valid authorization.

6.38.4.8. Aircrews operating missions that require unique or specially developed routing will normally be briefed at home station, onload station, and/or by the last C2 facility transited prior to performing the critical portion of the mission.

6.38.4.9. Except on weather reconnaissance missions, aircrews normally are not tasked to and should not fly "due regard" routing unless specifically directed in the mission FRAG or for an AMC-directed mission and coordinated with proper authorities through the TACC. The "due regard" or "operational" option obligates the military AC to be his or her own ATC agency and separate his or her aircraft from all other air traffic. If operational requirements dictate, an AC may exercise the "due regard" option to protect his or her aircraft. When the threat has terminated, the aircraft will return to normal air traffic services. Refer to *FLIP*, General Planning, for guidance on "due regard."

6.39. NAVAID Capability:

6.39.1. North Atlantic MNPS standards (*FLIP,* Area Planning 2) and procedures for aircraft not in compliance are mandatory for use. Aircraft that have lost one INS prior to airspace entry will return to the nearest maintenance facility. ***NOTE:*** With one INS inoperative, advise ATC unless within range of normal radio aids. Check the accuracy of remaining INSs using all available NAVAIDs.

6.39.2. Airspace where RVSM is applied is considered special qualification airspace. Both the operator and specific aircraft type must be approved for operations in these areas. The CT-43 is not yet approved for unrestricted use in the full RVSM envelope. Once the aircraft and aircrew are in compliance, refer to *FLIP* AP/2 and the following for RVSM requirements:

6.39.2.1. Both primary altimeters, at least one autopilot, the altitude advisory system, and the transponder must be fully operational prior to entry into RVSM airspace. If any of this equipment fails prior to entering RVSM airspace, a new clearance will be requested to avoid this airspace.

6.39.2.2. The autopilot should be engaged during level cruise, except when circumstances such as turbulence or the need to retrim the aircraft require disengagement.

6.39.2.3. Crosscheck the altimeters prior to or immediately upon coast out. Record readings of both altimeters and retain the readings for use in contingency situations.

6.39.2.4. Continuously crosscheck the primary altimeters to ensure they agree ± 200 feet.

6.39.2.5. Aircrews should limit climb and descent rates to 1,000 feet per minute when operating in the vicinity of other aircraft to reduce potential effects on TCAS operations.

6.39.2.6. If any of the required equipment fail after entry into RVSM airspace, immediately notify ATC and coordinate a plan of action.

6.39.2.7. In the aircraft forms, document malfunctions or failures of RVSM required equipment, including the failure of this equipment to meet RVSM tolerances.

6.40. Communications Instructions Reporting Vital Intelligence Sightings (CIRVIS) and Other Reports. Report all vital intelligence sightings from aircraft as indicated in *FLIP* General Planning or FLIP En Route Supplement.

6.40.1. CT-43 aircraft subjected to harassment or hostile action by foreign aircraft will immediately contact the nearest US Air Force air and ground voice facility and report the encounter. Include the

harassing aircraft's nationality, type, insignia, and any other identifying features. Note the position, heading, time, and speed when harassed, and the type of harassment. Request relay of the report to the nearest C2 center. Also attempt to contact the nearest command post when in UHF and VHF range.

6.40.2. Other incidents will be reported as indicated in JCS Pub 6-0, *Doctrine for Command, Control, Communications, and Computer (C4) Systems Support to Joint Operations,* and AFM 10-206, *Operational Reporting.*

6.41. In-Flight Meals. The AC and CP should not eat meals at the same time.

6.42. Communications:

6.42.1. High Frequency (HF) Communications. Confine message traffic to essential operational matters. Perform an HF radio ground check prior to takeoff when the use of HF radio may be required for ATC or C2 communications. Establish HF contact before going out of UHF and VHF range. If unable to establish HF contact with the controlling HF station and an alternate means of relay of ATC information in oceanic areas is not available, return to the nearest suitable support base.

6.42.2. General. Provide the ARTCC position and weather observations when required. If unable to contact an ATC agency, attempt relay through the Global HF stations.

6.42.3. AF Form 72, Air Report (AIREP). When directed by departing weather facility, take and record an AIREP at each position report over a Category I route. Identify inaccurate CFP winds by special report if the average wind for a route segment exceeds either 30 degrees error in wind direction or 25 knots in wind speed. Turn in the completed AF Form 72 to the destination Air Force weather facility.

6.43. In-Flight Emergency Procedures. Report deviations from directives that may occur as a result of an emergency in accordance with AFI 11-202, Volume 3, and this AFI.

6.43.1. When practical after completing the aircraft emergency action checklists and associated actions, crews should furnish the controlling agency and appropriate C2 center a description of the difficulty, assistance required, intentions, and any other pertinent information.

6.43.2. A Conference Skyhook may be initiated when additional expertise is necessary to cope with emergencies or other conditions. Communications procedures are as follows:

6.43.2.1. When in the local area and in UHF or VHF range, initiate the conference over appropriate frequencies. When en route and out of UHF range, use HF radios to establish a phone patch with the nearest or controlling C2 center, as appropriate.

6.43.2.2. Provide the following information when time permits:

6.43.2.2.1. Narrative description of the situation to include actions taken by the crew and intentions of the AC.

6.43.2.2.2. Fuel onboard and hours of endurance.

6.43.2.2.3. Position.

6.43.2.2.4. Altitude and flight conditions.

6.43.2.2.5. Number of personnel and DVs on board.

6.43.2.2.6. AC's qualifications.

6.43.2.2.7. Planned landing base.

6.43.2.2.8. ETA at landing base.

6.44. Need for Medical Assistance. When a person aboard the aircraft requires medical care, inform the station of intended landing in sufficient time so medical personnel can meet the aircraft. Include the person's gender, approximate age, and major complaint in the request.

6.45. Weather Forecasts:

6.45.1. It is the pilot's responsibility to obtain destination weather prior to descent. The primary means is from any US Air Force base weather station via pilot-to-meteorologist service (PMSV) or through a US Air Force aeronautical station.

6.45.2. For aircraft flying into EUCOM AOR, contact USAFE/OWS at Semback AB GE, (DSN 314-496-6145). For aircraft flying into SOUTHCOM AOR, contact 25 OWS at Davis-Monthan AFB AZ (DSN 228-1977).

6.45.3. The ATC system can provide weather information to en route aircraft. ARTCCs have a limited capability to provide weather information to en route aircraft within CONUS. SIGMET advisories will be transmitted from the servicing ATC unit. Crews will consider all SIGMETs valid for their aircraft until verified as not applicable with a military metro service.

Section 6F—Arrival Procedures

6.46. Descent:

6.46.1. Prior to descent into unfamiliar areas, appropriate terrain charts (operational navigation chart [ONC], sectional aeronautical chart, tactical pilotage chart [TPC], or joint operations graphic [JOG] chart) should be reviewed to increase aircrew situational awareness of obstructions. Primary crewmembers will not be involved in duties other than aircraft operations, descent and approach monitoring, and required checklist items from the initial descent point to landing.

6.46.2. If available, fly a precision approach at night or during marginal weather. If a precision approach is not available, fly any available approved instrument approach. For training or evaluations at familiar fields, pilots may fly nonprecision approaches or VFR traffic patterns. The pilot not flying the approach will monitor a precision approach, when available, to enhance safety.

6.47. Instrument Approach Procedures:

6.47.1. Prior to starting an instrument approach or beginning an en route descent, pilots will confirm that existing weather is reported to be at or above required minimums for the lowest compatible approach. Pilots will increase the published visibility minimums of an instrument approach by 1/2 statute mile (SM) or as noted in NOTAMs, on ATIS, or on the approach plate, when the runway approach lighting system (ALS) is inoperative. ***NOTE:*** This applies only to the ALS itself, not to visual approach slope indicators (VASI), precision approach path indicators (PAPI), and other lights that are not a component of the ALS.

6.47.2. For a precision approach, the DH will provide a height above touchdown of 200 feet or higher. For precision approach radar (PAR) approaches, visibility will be no lower than RVR 2,400 (730 meters) or 1/2 mile visibility (800 meters) with no RVR readout available.

6.47.3. Circling approach minimums will be as published for the applicable aircraft category. If not published by category, limit circling minimums to an MDA based on a height above airport (HAA) and visibility as indicated below or as published, whichever is higher:

6.47.3.1. Category C: 500 feet HAA and 1 1/2-mile visibility.

6.47.3.2. Categories D and E: 600 feet HAA and 2-mile visibility.

6.47.4. For AMC aircrews, NDB approaches may be flown in daylight, VFR conditions only. Arrival at any airfield with only an NDB approach (published or available) is limited to day, VFR operations. An NDB may be used at night or in instrument meterological conditions (IMC) for alignment to a precision final (that is, procedure turn, holding pattern in lieu of procedure turn, or procedure track to align the aircraft on an inbound course for a precision final approach). Departure from an airfield with only an NDB approach may be accomplished at night or in IMC conditions if a departure alternate is available that meets the requirements of paragraph **6.20.**

6.47.5. Prior to starting an instrument approach, pilots will confirm their aircraft can meet or exceed all climb gradients specified in the missed approach procedure based on the number of engines operating when the approach is begun. If missed approach climb charts are not available, use the takeoff obstacle clearance charts. If unable to meet required climb gradients, prior to commencing the approach, coordinate alternate missed approach procedures with the ATC who will ensure terrain clearance. If this is not possible, do not attempt the approach.

6.47.6. If established on a segment of the approach or being radar vectored to final approach and the weather is reported or observed to be below approach minimums, the AC has the option of continuing the approach to the missed approach point or DH. If the AC decides to abandon the approach, he or she will level off (or descend if a lower altitude is required for the missed approach procedure). Comply with the last assigned clearance until a new or amended clearance is received.

6.47.7. Do not continue the approach below minimums unless the aircraft is in a position to make a safe landing and the runway environment is in sight. Category II approaches will not be continued if weather is reported below Category II minimums. If the approach is continued, the AC must plan to have sufficient fuel available to complete the approach and missed approach and proceed to a suitable alternate with normal fuel reserve. The AC has final responsibility for determining when the destination is below designated minimums and for initiating proper clearance request.

6.47.8. The following alternate flight publications are authorized if acceptable *DoD FLIP* products are not available:

6.47.8.1. US Department of Commerce, National Oceanic and Atmospheric Administration, publications.

6.47.8.2. Jeppesen and host nation instrument procedures. These may be used if they are MAJCOM approved in accordance with AFI 11-202, Volume 3. Crews will contact the controlling agency to confirm MAJCOM approval prior to flying these approaches. If not MAJCOM approved, comply with AFI 11-203, Volume 3, requirements for "destination without a published instrument approach."

6.47.9. Aircrews performing approaches and landings at locations where temperatures are 0 ^{o}C or below will refer to the Flight Information Handbook, Section D, Temperature Correction Chart, to correct MDA, decision height, and other altitudes inside the FAF if required.

6.48. Classified Equipment and Material:

6.48.1. When classified equipment is onboard, ensure the C2 center or base operations office is aware of the requirement for aircraft security according to **Chapter 7** of this AFI. At bases not under the jurisdiction of the Air Force, ensure the aircraft and equipment are protected. AFI 13-401, *Managing the Information Security Program*, provides specific guidance concerning the security of various levels of classified equipment aboard aircraft.

6.48.2. Ensure COMSEC and other classified materials are turned in at the destination and receipts are obtained for COMSEC and classified material. The onsite C2 center will provide temporary storage for COMSEC and other classified materials during en route, turnaround, and crew rest stops. If a storage facility is not available, the aircraft gun storage box may be used for material classified up to and including Secret. Encrypted COMSEC will only be transferred to authorized DoD personnel.

6.48.3. Aircrews will ensure they have an operable mode 4 when required for mission accomplishment. Aircrews will conduct an operational ground test of the mode 4 (ground test assets permitting) prior to deployment overseas or as specified in the OPORD or contingency or exercise tasking.

6.48.4. Attempt to fix an inoperable mode 4 prior to takeoff. Do not delay takeoff or cancel a mission for an inoperable mode 4, except when the aircraft will transit an area where safe passage procedures are implemented.

6.48.5. Conduct an in-flight check of the mode 4 on all missions departing the CONUS for overseas locations. Aircrews can request the mode 4 interrogation check through NORAD on UHF frequency 364.2.

6.48.6. Aircraft with inoperable mode 4 will continue to their intended destinations, and repairs will be done at the first destination where equipment, parts, and maintenance technicians are available. In theaters where safe passage is implemented, the aircraft will follow procedures for inoperable mode 4 as directed in the applicable airspace control order or air tasking order (ATO).

6.48.7. When conducted, ground and in-flight checks of the mode 4 are a mandatory maintenance debrief items. Crews will annotate successful and unsuccessful interrogation of the mode 4 on aircraft forms (AFTO Form 781A).

6.48.8. Aircrews will carry COMSEC equipment and documents required to operate the mode 4 on missions when required per paragraph **6.48.3.** Prior to departing for any destination without COMSEC storage facilities, crews will contact their local COMSEC managers for guidance.

6.48.9. Identification friend or foe/selected identification features (IFF/SIF) mode 4 codes must always be zeroed before leaving aircraft.

6.49. Unscheduled Landings:

6.49.1. When an unscheduled landing or crew rest occurs at a base without a passenger facility, the AC should immediately advise the appropriate C2 center and request assistance in arranging substitute airlift for passengers who are aboard.

6.49.2. The AC may use AF Form 15, **USAF Invoice,** authority to acquire the appropriate lodging accommodations. On return to home station, the AC will turn in the AF Form 15 to the local accounting liaison office. A copy of the service member's group travel orders, along with any other pertinent supporting data (for example, lodging invoice and/or receipts) must accompany the form. When the AF Form 15 has been validated, it will be forwarded to the servicing operating location (OPLOC) for payment, citing the funds of the unit whose aircraft was delayed.

6.50. Maintenance. Complete the AFTO Form 781 after each flight. After landing, crewmembers will debrief maintenance personnel on the condition of the aircraft, engines, avionics equipment, and all installed special equipment as required. At stations where there is no maintenance but maintenance support is required, crews should contact the contractor's 1-800 number to coordinate for required maintenance. Once the impact on the mission is determined, the crew should inform the controlling C2 center and home station prior to entering crew rest.

6.51. Border Clearance:

6.51.1. Normal Operations:

6.51.1.1. The unit dispatching the mission is normally responsible for the border clearance of all aircraft.

6.51.1.2. When staff support is not available, border clearance is the AC's responsibility. (Duties may be assigned to ground personnel, but the AC retains ultimate responsibility.) When a CT-43 aircraft is onloaded at a base without an air traffic function, the AC will ensure:

6.51.1.2.1. Crewmembers, troops, and passengers possess current passports and valid visas, when required.

6.51.1.2.2. Crewmembers, troops, and passengers have current certificates of immunization (shot records).

6.51.1.2.3. Cargo entry documents are in proper order.

6.51.1.2.4. The aircraft departs or enters the US through an air base where border clearance can be obtained.

6.51.1.2.5. A border clearance for aircraft cargo, passengers, crew and baggage is obtained (if required) before takeoff to a foreign area or after arrival from a foreign area.

6.51.1.2.6. The aircraft is sprayed according to the FCG and paragraph **6.52.** of this AFI.

6.51.2. Procedures for US Entry:

6.51.2.1. En route, the FA will distribute personal customs declarations (when not accomplished by passenger services) to all passengers, troops, and crewmembers. The FA will also brief passengers and other crewmembers on customs regulations and prepare and compile necessary border clearance.

6.51.2.2. En route, notify the C2 agency at the base of intended landing of any change in ETA to ensure a border clearance is accomplished as soon as possible after landing.

6.51.2.3. Obtain a permit to proceed when military necessities require an aircraft that has landed in the US for customs clearance proceed to another base in the US to obtain border clearance. The

permit to proceed delays customs inspection of cargo, passengers, and crew until arrival at the off-load station and saves intermediate off-loading and reloading normally required for customs inspection. The permit to proceed is valid only to the airport of next landing where the border clearance must be completed or a new permit to proceed issued by a customs official. Do not make intermediate stops between the issue point of the permit to proceed and destination of manifested cargo unless required by an emergency situation or directed by the controlling C2 center.

6.51.2.4. When an aircraft lands for a US border clearance, a US Customs representative normally will meet the aircraft to obtain the required documents. Do not deplane passengers, troops, or crewmembers unless necessary for safety or the preservation of life and property. Do not unload until approved by customs and agriculture personnel or designated representatives. This procedure applies to the initial landing in the US and all landings required when operating on a permit to proceed or until all crew, passengers, and cargo complete final border clearance.

6.51.3. Inspections of US Aircraft by Foreign Officials:

6.51.3.1. Follow US Air Force policy on status of military aircraft as stated in the FCG, General Information, Chapter 3. In substance, this policy holds that US military aircraft are immune from searches, seizures, and inspections (including customs and safety inspections) by foreign officials. In addition, ACs must be aware of and adhere to any specific FCG provisions for individual countries.

6.51.3.2. If confronted with a search request by foreign authorities, aircrews will use the following procedures:

6.51.3.2.1. In most cases, search attempts may be halted simply by the AC's statement to the foreign official that the aircraft is a sovereign instrumentality not subject to search without consent of US Air Force headquarters or US Department of State officials in the country concerned. This should be clearly conveyed in a polite manner so as not to offend foreign authorities who may honestly, but mistakenly, believe they have authority to search a US Air Force aircraft.

6.51.3.2.2. If foreign authorities insist on conducting a search, the AC should make every effort to delay the search until he or she can contact US Air Force headquarters (through AMC C2) or the appropriate embassy officials. The AC should then notify these agencies of the foreign request by the most expeditious means available and follow their instructions.

6.51.3.2.3. If foreign officials refuse to desist in their search request, pending notification to US Air Force headquarters or the appropriate embassy, the AC should indicate he or she would prefer to fly the aircraft elsewhere (if fuel, flying time, and mechanical considerations permit a safe flight) and request permission to do so.

6.51.3.2.4. If permission is refused and the foreign authorities insist on forcing their way onboard an aircraft, the AC should state that he or she protests the course of action being pursued and intends to notify both US Air Force headquarters and appropriate American embassy of the foreign action. The AC should not attempt physical resistance and should report the incident to US Air Force headquarters and appropriate American embassy as soon as possible. If the inspection cannot be avoided, the AC should escort foreign authorities.

6.51.3.3. Other procedures may apply when carrying sensitive cargo or equipment. Follow these procedures and applicable portions of classified FCG supplements.

6.52. Insect and Pest Control:

6.52.1. ACs will ensure required spraying is accomplished according to AFJI 48-104, *Quarantine Regulations of the Armed Forces*, the FCG, or as directed by higher headquarters. Certify the spraying on Customs Form (CF) 7507, or a form provided by the country transited. Aircraft should never be sprayed with passengers onboard. The only exception is when the mandated by the FCG.

6.52.2. When spraying is required, use an insecticide (aerosol d-phenothrin-2 percent), National Stock Number (NSN) 6840-01-067-6674 (or equivalent), to spray the aircraft.

6.52.3. Direct the nozzle toward the ceiling of the compartment or space being sprayed. Spray spaces inaccessible from within the aircraft after completely loading fuel, baggage, cargo, and passengers. Spray the cabin, flight deck, and other spaces accessible from within the aircraft after the crew is aboard and after closing all doors, windows, hatches, and ventilation openings. Spray for 4 seconds unless longer periods are specified for the country being transited. ***NOTE:*** Keep used aerosol cans separate from other trash so they may be disposed of safely.

CAUTION

If the insecticide label directs disembarkation after use, spray prior to boarding crew or passengers. Close all doors and hatches for 10 minutes after dispensing and ventilate for 15 minutes before allowing anyone on board.

6.52.4. When seeing any insect or rodent infestation of the in-flight aircraft, the AC will notify the destination C2 center, base operations, or airport manager of the situation before landing so the proper authorities can meet the aircraft.

6.52.5. On arrival at an aerial port of disembarkation, do not open door or hatch except to enplane officials required to inspect the aircraft for insect or rodent infestation or to deplane the minimum number of crewmembers required for block-in duties. Do not on-load or off-load cargo or passengers until the inspection is satisfactorily completed. This procedure may be altered to satisfy mission or local requirements, as arranged by the base air terminal manager or the local C2 organization.

Section 6G—Miscellaneous Procedures

6.53. Dropped Object Prevention. If an externally dropped object is discovered, the flight crew will notify the controlling agency as soon as practical (include routing, altitude, weather, etc.) and notify maintenance at the first AMC station transited.

6.54. Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR). FDR and CVR systems, if installed, should be operative prior to departure and operated continuously from the start of the takeoff roll until the aircraft has completed landing roll at destination. If en route failure occurs, continue the mission to a station where adequate repairs can be made. If involved in a mishap or incident, open the CVR power circuit breaker after landing and after terminating the emergency. CVR recordings are privileged communications and are to be used solely for mishap prevention purposes; they will not be used for disciplinary action according to AFI 91-204.

6.55. Life Support and Dash 21 Equipment Documentation:

6.55.1. The AC or designated representative will:

6.55.1.1. Prior to departing home station or en route stations, ensure appropriate serviceable protective clothing, life support, survival, and dash 21 equipment for the entire or remainder of the mission are aboard the aircraft.

6.55.1.2. Prior to departing home station and following en route crew changes, review AF Form 4076, **Aircraft Dash 21 Equipment Inventory,** to ensure required dash 21 equipment has been certified as installed by maintenance, the initial check has been signed by maintenance, and configuration documents match mission requirements.

6.55.1.3. Prior to departing home station and following en route crew changes, review, sign, and date AFTO Form 46, **Pre-positioned Life Support Equipment,** to ensure required protective clothing and life support and survival equipment have been certified as installed by aircrew life support and configuration documents match mission requirements. Ensure appropriate number and type of life preservers are aboard for over-water missions carrying children and infants.

6.55.2. Aircrew members discovering equipment missing will:

6.55.2.1. Make an AFTO Form 781 entry for the missing equipment. Also ensure the equipment removed from the aircraft at an en route station is documented in the AFTO Form 781.

6.55.2.2. Annotate AF Form 4076 and AFTO Form 46 (in the next vacant column), indicating the quantity remaining for the item. Ensure the ICAO location designator is entered above the check number of that column. Leave AF Form 4076 and AFTO Form 46 onboard the aircraft in the event of an en route crew change.

6.55.2.3. Advise the AC about the missing equipment and determine whether it should be recovered or replaced before mission continuation.

6.55.2.4. Assist as required in preparing reports of survey for missing equipment.

6.55.2.5. When possible, advise HQ AMC/DOTL before mission continuation.

6.55.3. If more equipment is discovered during the preflight than is annotated on the AF Form 4076 and AFTO Form 46, annotate the total quantity in the next vacant column for the item. Ensure the ICAO location designator is entered above the check number of that column.

6.56. Passenger Anti-Hijacking Inspections. Board space-available passengers only after anti-hijacking inspections have been completed. If a space-available seat release is anticipated at an en route station, advise the local passenger service facility of the inspection requirement. (Procedures for anti-hijacking inspections by the aircrew at stations without a military passenger service facility are specified in **Chapter 13**.) The AC has final authority for accepting space-available passengers.

6.57. Weather Debrief. Debrief the base weather station duty forecaster, if available, on significant weather encountered en route. Give the completed AF Form 72 to the forecaster at first opportunity. Debrief the actual wind factor.

6.58. No-Show Passenger Baggage. No-show passenger baggage or baggage of passengers removed from the flight will be downloaded prior to departure.

6.59. Airfield Data Reports. Aircrews transiting strange airfields or airfields where conditions may adversely affect subsequent flight will report airfield characteristics that produce illusions, such as run-

way length, width, slope, and lighting, as compared to standard runways, sloping approach terrain, runway contrast against surrounding terrain, haze, glare, etc. They will debrief the next C2 center transited.

6.60. Impoundment of Aircraft. If an aircraft is involved in a serious in-flight incident, the AC should impound the aircraft immediately after landing and contact the controlling C2 center for further instructions.

Chapter 7

AIRCRAFT SECURITY

Section 7A—Security Procedures

7.1. Overview:

7.1.1. This chapter provides guidance on aircraft security and preventing and resisting aircraft piracy (hijacking) of CT-43 aircraft. AFI 13-207; AFI 31-101, *The Air Force Installation Security Program (FOUO);* and specific MAJCOM security publications contain additional guidance. Aircrews will not release information concerning hijacking attempts or identify armed crewmembers or missions to the public.

7.1.2. The AC will ensure adequate security of the aircraft is provided at all times. This includes ensuring the aircraft is properly chocked and responsible personnel on both military and civilian airfields are advised as to the length of stay and where the crew may be contacted.

7.2. Security Requirements:

7.2.1. When required, ACs will receive a threat assessment and security capability evaluation briefing at home station and updates at en route command and control facilities.

7.2.2. The AC will have the aircraft locked with security system employed during all remain overnight (RON) sorties and at other times when a crewmember is not at the aircraft:

7.2.2.1. If forced entry is apparent, notify the local authorities and nearest command and control. Inspect the aircraft thoroughly.

7.2.2.2. Coordinate with the local base operations or transient alert representatives on procedures for servicing the aircraft while the crew is away.

7.2.3. The Phoenix Raven Security Team (RST) will support mobility operations by providing security protection for aircraft transiting locations where a high threat, host, or en route security support may be marginal, unreliable, or nonexistent. A daily threat working group (TWG) assesses security requirements for mobility missions and helps determine if an RST is required. When assigned Phoenix RST support, the AC will:

7.2.3.1. Verify MAJCOM travel status on each RST travel order. The RST will report directly to the AC, when assigned.

7.2.3.2. Add RST members to the aircrew's flight orders.

7.2.3.3. Be responsible for the RST's welfare (transportation, lodging, etc.).

7.2.3.4. Ensure the RST receives an aircraft mission briefing and aircraft egress or passenger briefing (as appropriate).

7.3. Protective Standards for Aircraft Carrying DVs: (This paragraph applies specifically to aircraft transporting DVs, code 4 or above.)

7.3.1. AMC Bases. Special crew procedures are not required at AMC bases. Security will be provided.

7.3.2. Non-AMC Bases. ACs are responsible for aircraft security at en route stops as follows:

7.3.2.1. At DoD installations, notify the base security of estimated arrival and departure times. Request continuous security surveillance during the entire ground time. If the installation is unable to comply, arrange for the best protection available.

7.3.2.2. At foreign or civilian installations, notify the airport manager, commander, or defense attaché to arrange for aircraft security. If available security is inadequate, purchase additional security using AF Form 15.

7.3.2.3. If, in the AC's opinion, airfield security is inadequate and the safety of the aircraft is in question, he or she may waive the flight duty period limits and crew rest requirements and depart as soon as possible for a base considered reliable. Report movement and intentions to the controlling agency as soon as practical. If departure is not possible, the aircrew must secure the aircraft to the best of their ability. In no case, will the entire crew leave the aircraft unattended. Crew rest requirements will be subordinate to aircraft security when the airframe may be at risk. The AC should rotate a security detail among the crew to provide for both aircraft protection and crew rest until relief is available. Request security assistance from the nearest DoD installation, US Embassy, or local military or law enforcement agencies as appropriate.

7.4. Detecting Unauthorized Entry:

7.4.1. When it is parked on a secure ramp, the aircraft will normally be left unlocked or unsealed to allow ground personnel immediate access. If, in the AC's judgment, the aircraft needs to be locked and sealed in order to detect unauthorized entry:

7.4.1.1. Use available aircraft ground security locking devices.

7.4.1.2. Secure the doors in a manner that will indicate unauthorized entry (for example, tape the inside of doors to the airframe so an entry pulls the tape loose).

7.4.1.3. Close and lock the door.

7.4.1.4. Wipe the immediate area around the lock and latches clean to aid in investigation of a forced entry.

7.4.1.5. Report any unauthorized entry or tampering to the Air Force of Special Investigations (AFOSI), security police or local authorities, and the C2 center agency. Have aircraft thoroughly inspected prior to flight.

7.4.2. Security awareness is crucial to effective mission accomplishment. Aircrews must always remain vigilant to their surroundings, especially at high-threat, low-security locations. During preflight activities, aircrews will inspect accessible areas, to include aircraft wheel wells and the tail cone compartment for unfamiliar devices. Report any suspicious items to host security forces. Aircrews will maintain a heightened security posture throughout all pretakeoff activities.

Section 7B—Anti-Hijacking Procedures

7.5. Preventing and Resisting Hijacking:

7.5.1. The Air Transportation Act of 1974 and the Federal Aviation Act of 1958, as amended, vest the FAA Administrator with exclusive responsibility for the direction of law enforcement activity in aircraft hijacking situations involving all aircraft (civil and military) in flight in the US.

7.5.2. In taking action during an aircraft hijacking situation, military forces will act under military command within the scope of their duties.

7.5.3. In the event an aircraft involved in an aircraft hijacking situation is carrying documents, equipment, or material DoD has determined to be highly sensitive or weapons of mass destruction, DoD will provide FAA, and where appropriate, the Federal Bureau of Investigation (FBI), with all pertinent information. Where possible, the FAA will consult and cooperate with DoD prior to directing any law enforcement activity.

7.5.4. An aircraft is most vulnerable to hijacking when the aircrew is aboard and the aircraft is operationally ready for flight.

7.5.5. A concerted effort must be made to prevent the hijacking of military or military contract aircraft by detecting potential hijackers before they board the aircraft.

7.5.6. Should preventive efforts fail, any actual attempt to hijack a military aircraft must be resisted in a manner appropriate to the situation.

7.5.7. Because air piracy may be committed by political terrorists or individuals to whom the threat of death is not a deterrent but a stimulus, ordinary law enforcement procedures may be ineffective. Thus, successful conclusion of a hijacking situation and apprehension of the hijackers may require use of specialized law enforcement techniques and procedures.

7.5.8. Delaying actions have been most successful in overcoming hijackings without loss of life or property.

7.5.9. In the case of an aircraft carrying passengers, the primary concern is the safety of the passengers.

7.5.10. Assistance to hijacked civil or military contract aircraft will be rendered as requested by the pilot in command of the aircraft and the authority exercising operational control of the anti-hijacking effort.

7.5.11. Commanders at all levels must ensure preventive measures are taken to minimize access to the aircraft by potential hijackers. When a CT-43 is operating away from home station, the AC will ensure provisions of this chapter and AFI 13-207, as supplemented, are complied with.

7.5.12. The host station passenger processing or manifesting facility should conduct anti-hijacking inspections. Do not board passengers until the AC is fully satisfied with inspection results. In the absence of qualified passenger service representatives, the AC will ensure the anti-hijacking inspection of passengers and baggage is accomplished.

7.5.13. Medical facility commanders are responsible for anti-hijacking inspection of patients. When patients are delivered to the aircraft by civilian sources, the aircrew will perform required inspections prior to loading.

7.5.14. During exercises or contingencies in support of combat operations involving the movement of large groups of personnel, the unit being supported should manifest passengers and perform anti-hijacking inspections.

7.5.15. Passengers will not carry weapons or ammunition on their person or in hand-carried baggage aboard an aircraft except special agents, guards of the Secret Service or State Department, and other individuals specifically authorized to carry weapons.

7.5.16. If weapons must be cleared, ask the individual to move to a safe, clear area at least 50 feet from any aircraft, equipment, or personnel before unholstering or unslinging his or her weapons and to clear the weapon in accordance with standard safety procedures.

7.6. Initial Response to Air Piracy (Hijacking). When an act of air piracy involves an Air Force installation or aircraft in the US, response will be according to the following guidelines until such time as FAA assumes active direction of anti-hijacking efforts. Resist all attempts to hijack a military aircraft. Resistance may vary from simple discussion through deception and subterfuge to direct physical confrontation, including the prudent use of weapons. The following guidelines should be used to counter a hijacking, actual or threatened, while the aircraft is on the ground:

7.6.1. Delay movement of the aircraft to provide time for ground personnel and the aircrew to establish communication and execute coordinated resistance actions.

7.6.2. The authority for determining when ground resistance will be discontinued is vested in the highest available level of command. When adequate communication cannot be established or time does not permit, this authority is delegated in the following order:

7.6.2.1. MAJCOM commander exercising operational control of the aircraft.

7.6.2.2. MAJCOM commander in whose area of responsibility the airfield lies.

7.6.2.3. Senior onscene operational commander.

7.6.2.4. AC in compliance with MAJCOM directives.

7.7. In-Flight Resistance to a Hijacking. When airborne, success in thwarting a hijacking depends on the resourcefulness of the aircrew. Many variables of a hijacking prevent use of any specific counter-hijacking procedure. Some key factors should be evaluated before deciding a course of action to be taken, including the nature of the threat, danger to life or crippling damage to the aircraft in flight, destination indicated by the hijacker, and presence of sensitive material onboard. Some counter-hijacking actions the aircrew may consider are:

7.7.1. Engaging the hijacker in conversation to calm him or her and to evaluate what course of action might be effective.

7.7.2. Dissuading the hijacker.

7.7.3. Using facts or subterfuge to convince the hijacker intermediate stops are necessary.

7.7.4. Proposing more favorable alternatives, such as landing in a neutral, rather than a hostile, country.

7.7.5. Exploiting any reasonable opportunity to incapacitate or overcome the hijacker physically, including the prudent use of firearms.

7.8. Communications Between Aircrew and Ground Agencies in a Hijacking. Crews facing a hijacking threat will notify ground agencies by any means available as soon as practical and follow up with situation reports as circumstances permit.

7.8.1. If possible, transmit an "in the clear" notification of hijacking to ATC. Controllers will assign an IFF code 7500 (which does not prohibit subsequent selection of code 7700).

7.8.2. If "in the clear" transmissions are not possible, report "am being hijacked" by setting the transponder to code 7500. If unable to change the transponder code (or when not under radar control), transmit a radio message to include the phrase "(call sign) transponder seven five zero zero."

7.8.3. Controllers will acknowledge receipt and understanding of transponder code 7500 by transmitting "(call sign) (facility name), verify squawking 7500." An affirmative reply or lack of reply from the pilot indicates confirmation, and the proper authorities will be notified.

7.8.4. To report "situation appears desperate; want armed intervention," after code 7500 is used, change to code 7700. If unable to change transponder code to 7700 (or when not under radar control), transmit "(call sign) transponder seven seven zero zero."

7.8.5. Before changing from code 7500 to code 7700, remain on 7500 for at least 3 minutes or until a confirmation of code 7500 is received from ATC, whichever is sooner. ATC will acknowledge code 7700 by transmitting "(call sign) (facility name) now reading you on transponder seven seven zero zero."

7.8.6. An aircraft squawking 7700 after squawking 7500 that is are not in radio contact with ATC is considered by ATC to have an in-flight emergency (in addition to a hijacking), and the appropriate emergency procedures will be followed. Notification of authorities in this case includes information that the aircraft displayed the hijack code as well as the emergency code.

7.8.7. To report "situation still desperate, want armed intervention and aircraft immobilized," leave flaps full down after landing or select flaps full down while on the ground. To facilitate message distribution, transmit "(aircraft call sign) flaps are full down."

7.8.8. To report "leave alone, do not intervene," retract the flaps after landing. Pilots who retract flaps after squawking 7700 should return to code 7500 and remain on code 7500 for the next leg of the hijacked flight unless the situation changes. Transmit "(call sign) back on seven five zero zero" to emphasize the fact intervention is no longer desired.

7.9. Forced Penetration of Unfriendly Airspace. The following procedures are designed to deter possible hostile action against a hijacked aircraft that has been forced to penetrate airspace of a nation unfriendly to the US.

7.9.1. If instructions from the unfriendly nation are received either by radio contact or by air intercept before crossing its boundary, comply with instructions received.

7.9.2. If no contact with unfriendly nation is made before approaching a boundary:

7.9.2.1. Maintain TAS not more than 400 knots.

7.9.2.2. Maintain an altitude between 10,000 and 25,000 feet if possible.

7.9.2.3. Fly a direct course toward destination announced by the hijacker, if no course is specified.

7.9.2.4. Transmit the international distress signal MAYDAY on any of the international distress frequencies (121.5 MHz, 243.0 MHz, or 2182 KHz) in an effort to establish communications.

7.9.2.5. Set mode 3 code 7700 on transponder.

7.9.2.6. If radio contact cannot be established, follow procedures set forth in *FLIP.*

7.9.3. Consider the presence of classified documents and equipment aboard the aircraft. When a landing in an unfriendly nation is imminent, attempt to dispose of or destroy the equipment or material.

7.10. Arming of Crewmembers. Aircrews will be armed on all overseas missions unless Phoenix RSTs are a part of the crew. CT-43 crew chiefs will be armed, and all crewmembers should know who is armed.

7.10.1. Before departing home station, crewmembers will obtain weapons, ammunition, and a gun box lock and key (if applicable). Crewmembers will be armed according to AFI 31-207, *Arming and Use of Force by Air Force Personnel*, and MAJCOM publications. If an armed crewmember must leave the crew en route, transfer the weapon to another authorized crewmember by using AF Form 1297.

7.10.2. Load and unload weapons at approved clearing barrels. To transfer loaded weapons to another crewmember, place the weapon on a flat surface. Do not use hand-to-hand transfer.

7.10.3. Wear weapons in a concealed holster at all times to prevent identifying armed crewmembers. Do not wear weapons off the flight line except to and from the armory and other facilities associated with aircrew activities (base operations, fleet service, cargo or passenger terminal, flight line cafeteria or snack bar, etc.).

7.10.4. Crewmembers will be armed prior to preflight duties and until completion of all offload duties.

7.10.5. During crew rest, store weapons in the most secure facility available, normally a base armory. If a weapons storage facility is not available, secure firearms and ammunition in the aircraft. If aircraft is not equipped with a gun box, leave weapons in the most secure and least visible location on the aircraft. Lock aircraft during all RONs.

Section 7C—Anti-Terrorist Procedures

7.11. Force Protection. Crews must be alert to possibility of terrorist activities at all times. See paragraphs **7.12.** through **7.15.** for considerations that may help crewmembers avoid becoming victims of terrorism when operating in overseas locations.

7.12. Personal Conduct. Crews must realize their conduct can make them a target for individuals who are dissatisfied with US involvement in their national (foreign) affairs. Because local foreign nationals may not condone a military presence, US crew conduct will be watched and judged. Therefore, crews will conduct themselves as follows:

7.12.1. Maintain good military bearing both on and off duty.

7.12.2. Avoid dressing in clothes that highlight the fact you are Americans (for example, cowboy hats, wide belt buckles, shirts with pro-American slogans, etc.).

7.12.3. Do not wear clothing displaying profanity.

7.12.4. Know where off-limits areas are and avoid them.

7.12.5. Beware of personnel offering to take you on a "personal" sightseeing tour.

7.12.6. Do not get involved with anyone trying to involve you in games of chance.

7.12.7. When possible, travel in groups of two or more.

7.12.8. Avoid demonstrations for any cause.

7.12.9. Avoid discussion of politics.

7.13. Ground Transportation Security. When traveling to and from billeting, messing facilities, etc., crews will consider the following to minimize drawing attention to themselves as potential targets:

7.13.1. Select a plain car; minimize the "rich American" look.

7.13.2. If possible, do not use a car that announces US government ownership.

7.13.3. Keep the gas tank at least half full at all times.

7.13.4. Do a thorough check of the car to look for signs of tampering; look at the undercarriage and wheel wells.

7.13.5. Park in well-lighted areas, preferably under US control.

7.13.6. Always lock your car. If possible, do not leave it on the street overnight.

7.13.7. Only leave the ignition key with parking attendants.

7.13.8. Before entering vehicles, check for suspicious objects. Look underneath vehicle seats.

7.13.9. Guard against establishing a routine. Vary times, routes, and modes of travel. Avoid late night travel.

7.13.10. Travel with companions or in convoys when possible.

7.13.11. Avoid isolated roads and dark alleys.

7.13.12. Ride with seat belts buckled, doors locked, and windows closed.

7.13.13. Do not allow the vehicle to be boxed in. Maintain enough interval between you and the vehicle in front so you can pass.

7.13.14. Circle the block for confirmation of surveillance.

7.13.15. Do not stop or take other actions that could lead to a confrontation.

7.13.16. Recognize events that could signal the start of an attack, such as:

7.13.16.1. A cyclist falling in front of their car.

7.13.16.2. A flagman or workman stopping their car.

7.13.16.3. Fake police or government checkpoints.

7.13.16.4. Disabled vehicle/accident victims on the road.

7.13.16.5. Unusual detours.

7.13.16.6. An accident in which their car is struck.

7.13.16.7. Cars or pedestrian traffic that box them in.

7.13.16.8. Sudden activity or gunfire.

7.13.17. If under attack, do the following:

7.13.17.1. Consider sounding the horn.

7.13.17.2. Put another vehicle between them or their pursuer.

7.13.17.3. Execute an immediate turn and escape, jumping curbs at a 30- to 45-degree angle at 35 mph minimum.

7.13.17.4. Ram a blocking vehicle only as a last resort.

7.13.17.5. Go to the closest safe haven and then report the incident to security police.

7.14. Personal Identification. Consider the following actions to avoid advertising the fact you are an American:

7.14.1. Do not discuss your military affiliation with strangers.

7.14.2. Avoid military style luggage such as B-4 bags and duffel bags with military logos, etc.

7.14.3. Consider placing your official passport and related documents (such as military ID, flight orders, club card, dog tags, and billeting receipts) in your hand-carried luggage, not in your wallet or purse.

7.14.4. Wear conservative styled civilian clothing when using commercial transportation.

7.14.5. Remember, the key is to maintain a low profile.

7.15. Hotel Security. When billeted in commercial hotels, be aware of the following:

7.15.1. If possible, obtain rooms between the second and sixth floors. These rooms are high enough to be less vulnerable to unauthorized entry from the outside, but low enough to simplify evacuation if necessary.

7.15.2. Always lock interior locks when occupying rooms.

7.15.3. Always assume your room is monitored and avoid viewing or discussing classified material.

7.15.4. Avoid establishing a predictable routine (for example, vary eating times and locations).

7.15.5. Avoid traveling on foot. Use a vehicle (hotel shuttle, commercial taxi, etc.).

7.15.6. In high threat areas, stay off the streets. (Use hotel dining facilities if available.)

Chapter 8

OPERATIONAL REPORTS AND FORMS

8.1. Overview. This chapter identifies operational reports and forms, as applicable.

8.2. AF Form 457, USAF Hazard Report:

8.2.1. The Air Force hazard reporting system provides a means for Air Force personnel to alert supervisors and commanders to hazardous conditions requiring prompt corrective action (AFI 91-202).

8.2.2. For special procedures for hazard reports concerning weather, complete the front of the AF Form 457 and address it to the parent wing flying safety office. If a computer flight plan deficiency is involved, attach one copy of the AF Form 72, a MAJCOM-approved form (for example, AF Form 4115, **Flight Plan and Record**), and the computer flight plan (CFP) to the report. Send the report so the parent unit receives it within 5 days.

8.3. AF Form 651, Hazardous Air Traffic Report (HATR) (RCS: HAF-SE[AR] 7602):

8.3.1. The Air Force HATR program provides a means for personnel to report all near midair collisions and alleged hazardous air traffic conditions (AFI 91-202).

8.3.2. Make an airborne report of the hazardous condition to the nearest ATC agency (for example, center, FSS, control tower, or aeronautical radio station) and give the following information as appropriate:

8.3.2.1. Call sign.

8.3.2.2. Time and place (radial or distance measuring equipment [DME] of NAVAID, position relative to the airfield, etc.) of the occurrence.

8.3.2.3. Altitude or FL.

8.3.2.4. Description of the other aircraft.

8.3.2.5. Statement that a written HATR report will be filed upon landing. ***NOTE:*** The FAA must know if an official report is being filed.

8.3.3. File the HATR as soon as possible (within 24 hours) using any available means of communication. Normally, it should be filed at the Air Force base operations office at the landing airport. If this is impractical, but communications permit, notify the safety office of the Air Force base where the condition occurred, the safety office at the home base, or as prescribed by the overseas MAJCOM. In any case, provide the base or wing safety office with all available information needed to prepare AF Form 651. Turn in a completed copy of AF Form 651 to the wing safety office.

8.3.4. Individuals who submit HATRs on incidents are granted immunity from disciplinary action if:

8.3.4.1. Violation was inadvertent; that is, not deliberate.

8.3.4.2. No mishap occurred.

8.3.4.3. No criminal offense was intended or committed.

8.3.4.4. The individual reported the incident according to paragraphs **8.3.2.** and **8.3.3.**

8.4. AF Form 711, USAF Mishap Report:

8.4.1. Responsibilities. Notify the appropriate authorities of any mishap involving aircraft or crew.

8.4.2. Reportable Mishaps. Report damage to the aircraft or injury to the crew or passengers. Also, any damage or injury to another organization's equipment or personnel resulting from the movements or actions of an AMC aircraft or crew. Reportable mishaps include:

8.4.2.1. Physiological mishaps.

8.4.2.2. Engine flameout, failure, or required shutdown after engine start with intent for flight, regardless of damage. Incidents may be reported upon landing. ***NOTE:*** Intentional shutdowns for FCF or other nonemergency purposes are excluded. However, failure to restart will be reported using the criteria above.

8.4.2.3. Loss of thrust sufficient to prevent maintaining level flight at a safe altitude.

8.4.2.4. Engine case penetration by shrapnel from internal engine component failure.

8.4.2.5. Engine case rupture or burn through, engine bay fire, or massive fuel leakage.

8.4.2.6. Unselected thrust reversal.

8.4.2.7. Flight control malfunction (including AFCS and trim systems) resulting in an unexpected, hazardous change of flight attitude, altitude, or heading. When making the AFTO 781A, **Maintenance Discrepancy and Work Document,** entry, include the flag words "reportable flight control malfunction."

8.4.2.8. Malfunction of landing gear when difficulty is experienced, using emergency system or procedures.

8.4.2.9. In-flight loss of all pitot-static instrument indications or all gyro-stabilized attitude or directional indications.

8.4.2.10. Spillage or leakage of radioactive, toxic, corrosive, or flammable material from aircraft stores or cargo that, in the judgment of the reporting individual, is a significant hazard to the crew, passengers, or aircraft.

8.4.2.11. Human factors-related situation (for example, misinterpretation of instruments); crew overload (for example, tactile, aural, and visual input to the crew at a rate too fast to permit reasonable decisions based on the data received); too many actions required in too short a period of time; or confusion of controls such as would be caused by adjacent switches where the actuation of the wrong switch could create a dangerous situation. Anonymous reports of such situations are acceptable.

8.4.2.12. All cases of departure from intended takeoff or landing surface onto a surface not designed to normally support takeoff or landing loads.

8.4.2.13. All in-flight fires regardless of damage.

8.4.2.14. All bird strikes regardless of damage.

8.4.2.15. Any occurrence that does not meet established criteria for a reportable mishap but, in the judgment of the reporting individual, needs to be emphasized in the interest of safety.

8.4.3. Procedures. Report mishaps as soon as possible to the following offices in the following precedence: (***NOTE:*** Retain a copy of all relevant information and turn it in to the home station safety officer.)

8.4.3.1. MAJCOM flying safety officer.

8.4.3.2. Any other flying safety officer.

8.4.3.3. Nearest C2 center.

8.4.3.4. Base operations.

8.4.4. Required Information. Complete all appropriate areas of the form. Provide as much detail as possible.

8.5. Reports of Violations for Unusual Events or Circumstances, RCS: HAF-XOO(AR) 7118, Operations Event and Incident Report (OPREP-3). Violations identified in AFI 11-202, Volume 3, and alleged navigation errors (including over-water position errors exceeding 24 NMs and border and air traffic control violations) will be reported as follows:

8.5.1. Use the following format and include:

8.5.1.1. Factual circumstances.

8.5.1.2. Investigation and analysis.

8.5.1.3. Findings and conclusions.

8.5.1.4. Recommendations.

8.5.1.5. Actions taken.

8.5.1.6. Attachments, to include notification of incident, crew orders, statement of crewmembers (if applicable), and documenting evidence (logs, charts, etc.).

8.5.2. In addition to the information listed, download the historical flight plan onto a floppy disk and turn it in to the C2 facility or owning stan/eval office.

8.5.3. Send the original investigation report within 45 days to the appropriate MAJCOM. Air Force Reserve Command (AFRC) units receiving alleged violations will send the original investigation through channels to arrive at HQ AFRC/IGI within 35 days. HQ AFRC/IGI will send the investigation report to the MAJCOM within 45 days.

8.5.4. Follow the operational report (OPREP)-3 procedures for all aircraft notified of navigational errors exceeding 24 NMs as shown below (AFMAN 10-206, *Operational Reporting*):

8.5.4.1. On notification of a navigational position error, the AC (or agency receiving notification) will document the circumstances surrounding the incident (per paragraph **8.5.4.2.**) and ensure submission of an OPREP-3 through C2 channels.

8.5.4.2. The OPREP-3's content will include:

8.5.4.2.1. Name and location of unit submitting report.

8.5.4.2.2. Mission identification number.

8.5.4.2.3. Reference to related OPREPs-3.

8.5.4.2.4. Type of event. (State "Navigation position error.")

8.5.4.2.5. Date, time (zulu), and location (ARTCC area).

8.5.4.2.6. Description of facts and circumstances. Include aircraft type and tail number, unit (wing or squadron assignment of crew), home base, route of flight, point of alleged deviation, and miles off course.

8.5.5. ACs must keep MAJCOM C2 agencies informed of any unusual events or circumstances impacting their missions. Examples of reportable events include meaconing, jamming, intrusion, interception, fuel dumping, loss of multiple engines, hostile fire, and injury to passengers or crewmembers. This list is not all inclusive. Some events may require the C2 agency to forward OPREPs to higher headquarters. When in doubt, report it.

8.6. Petroleum, Oil, and Lubricants (POL)—Aviation Fuels Documentation. This paragraph describes procedures for the aviation fuel program (AVPOL) for Air Force aircraft. Procedures will be established for correct documentation, processing of forms and invoices, program oversight, and personnel responsibilities. (Refer to AFI 23-202, *Buying Petroleum Products, and Other Supplies and Services Off-Station;* AMC decentralization procedures; and AFMAN 23-110, Volume 1, Part 3, *Air Force Stock Fund and DPSC Assigned Item Procedures.*) An into-plane contract information and aviation into-plane reimbursement (AIR) card acceptor list is also listed under the air card section on the following web page: **www.kelly.af.mil/sfweb.**

NOTE: The AIR card is a commercial credit card which allows aircrews to purchase aviation fuel, fuel-related supplies, and/or ground services at commercial airports where no DoD or Canadian into-plane contract exist. Accepted at over 4,200 locations, it is intended to replace the AF Form 315 and AF Form 15 at locations that accept the AIR card. All Air Force aircraft will be issued an AIR card. Additional information is available at **www.kelly.af.mil/sfweb/aircard.htm**.

8.6.1. Responsibilities. Aircrew and maintenance personnel will be familiar with the procedures and documentation requirements of this paragraph. Purchases of avfuel not complying with this instruction may become the financial responsibility of the purchaser.

8.6.2. Aircraft will be refueled or defueled at DoD locations unless DoD-owned fuel is not available. In that case, fuel may be procured from other sources using the following priorities:

8.6.2.1. Defense fuel supply center (DFSC) or Canadian into-plane contracts. ***NOTE:*** *DoD FLIP* en route supplements will identify locations with into-plane contracts.

8.6.2.2. Foreign government air forces.

8.6.2.3. Open market purchase to include Shell International Trading Company (SITCO) agreement.

8.6.3. Aviation Fuels Documentation Use and Procedures:

8.6.3.1. AF Form 664, Aircraft Fuels Documentation Log. This form will be used to log and store all avfuels transaction documentation. Log *all* off-station transactions on the front of AF Form 664 and then insert the supporting documentation inside the envelope. Turn in AF Form 664, with supporting documentation, at the maintenance debriefing.

8.6.3.2. AF Form 315, United States Air Force Avfuels Invoice. This form will be used to purchase avfuel at non-DoD activities (AFI 23-202). When AF Form 315 is completed, log and place it inside the AF Form 664.

8.6.3.3. AF Form 15, United States Air Force Invoice. This form will be used for procurement of items or services required at commercial locations where normal DoD support and supplies are not available. If the vendor will not accept the aircraft identaplate, AF Form 15 will be used to pay for ground fuels, oils, or services. The completed form will be returned to the aircraft's home station for payment (AFI 23-202). When AF Form 15 is completed, log and place it inside AF Form 664.

8.6.3.3.1. If the vendor wants to be paid without submitting an invoice, the AC will retain the original AF Form 315 (to return it to home station for accounting and finance processing) and provide two legible copies of the form to the vendor. If the vendor wants to submit an invoice for payment, the AC will give him or her the original AF Form 315 to attach to the invoice.

8.6.3.3.2. Purchases at Canadian into-plane locations will be documented, using the local vendor's invoice. An AF Form 15 or 315 will not be accomplished. Handwrite the information from the aircraft identaplate to the vendor's invoice and complete a separate sheet with the information listed on the Aviation Issues to DoD and Non-DoD, Aircraft Refueling Tender Sheet (AFI 23-202). Log and place a copy of the documentation inside the AF Form 664.

8.6.3.3.3. Purchases at SITCO agreement locations require the presentation of the aircraft identaplate. The invoice must include the date of transaction, grade of the product, quantity issued or defueled, unit of measure, and signature of the Air Force representative. If the vendor also requires completion of an AF Form 15 or 315 in addition to his or her invoice, annotate "AF FORMS EXECUTED" on the vendor's invoice. Log and place the documentation inside the AF Form 664.

8.6.3.3.4. Purchases at noncontract commercial airfields will be accomplished using the AF Form 15 or 315. Refer to AFI 23-202 for guidelines on completing these forms.

8.6.3.3.5. For purchases at foreign military airfields, including replacement-in-kind locations, use the host country's forms to record the purchase. Information from the aircraft identaplate should be handwritten on the local form. Log and place a copy of the documentation inside the AF Form 664.

8.6.3.4. Aviation Into-Plane Reimbursement (AIR) Card. The AIR card is a commercial credit card that allows aircrews to purchase avfuel, fuel-related supplies, and/or ground services at commercial airports where no DoD or Canadian into-plane contract exists. Accepted at over 4,200 locations, the AIR card is intended to replace AF Forms 315 and 15 at locations that accept the AIR card. All Air Force aircraft will be issued an AIR card.

8.6.4. AF Form 1994, Fuel Issue/Defuel Document. This form will be used for purchases at all US Air Force locations using a valid DD Form 1896, **Jet Fuel Identaplate.** Log and place the form inside AF Form 664.

8.6.5. AFTO Form 781H, Aerospace Vehicle Flight Report and Maintenance Document. Complete this form according to applicable technical directives. When the form is removed from the jacket, turn it in to maintenance. Maintenance will retain it for 90 days after interfund billing to provide a secondary audit trail for fuels issue and flying hours.

8.6.6. DD Form 1896, Jet Fuel Identaplate. This is an aircraft fuel and oil charge card.

8.6.7. DD Form 1898, Avfuels Into-Plane Sale Slip. This is a fuel transaction receipt used for purchases at other DoD locations, including DFSC into-plane contract locations. Log and place the form inside AF Form 664. ***NOTE:*** If the contractor insists on completing his or her own invoice in addition to the DD Form 1898, annotate the invoice "DUPLICATE DD FORM 1898 ACCOMPLISHED."

8.6.8. Wing Scheduling Responsibilities. The wing scheduling office will:

8.6.8.1. Work with and provide a representative to the avfuel advisory group.

8.6.8.2. Prepare a monthly report for the invoice control officer by the 7th of each month, including the following: name of organization (by squadron), MDS, programmed flying hours for previous and current months, and actual flying hours for the previous month.

8.6.8.3. On the weekly flying schedule, provide the receiver's MDS, command of assignment, unit or squadron, and home station name for each sortie.

8.6.9. AC Responsibilities:

8.6.9.1. Local Training Missions. The AC will ensure the AFTO Form 781H is completely filled out prior to the maintenance debriefing; then turn it in at the debriefing.

8.6.9.2. Off-Station Missions. The AC will ensure:

8.6.9.2.1. AF Forms 15, 315, 664, and 1994; AFTO Form 781H; DD Form 1898; and all associated fuels receipts are completely filled out and placed inside the AF Form 664. (All Air Force aircraft must contain an eight-digit tail number.)

8.6.9.2.2. AF Form 664 (with all refueling documentation) and AFTO Form 781H are turned in at the maintenance debriefing.

8.6.9.2.3. AF Form 664 information is phoned, faxed, or sent by message back to the invoice control officer if the aircraft is to be off station past the last day of the month. ***NOTE:*** When situations arise that prevent the transmission of AF Form 664 data, relay the information on arrival at the first available AMC command post.

8.6.10. Maintenance Personnel Responsibilities. Maintenance personnel will ensure ground refueling and defueling documents are accurately completed and placed inside AF Form 664. Prior to deployment, they will ensure an adequate supply of fuels transaction documents are onboard the aircraft to complete the deployment.

8.7. AMC Form 54, Aircraft Commander's Report on Services/Facilities:

8.7.1. This form is an instrument for aircrews to report that services rendered or conditions encountered were unsatisfactory or detrimental to efficient air mobility operations; services rendered or procedures used were worthy of adoption by all MAJCOM organizations; or a performance rendered by a person (or persons) was commendable and deserves recognition.

8.7.2. Attempt to solve problems by contacting appropriate supervisors, including the senior commander, if conditions and situation warrant. If further action is deemed necessary or the problem requires increased visibility, complete AMC Form 54 and deliver it to the command post. Locations with no command and control facility will give the form to the senior representative. Locations with no senior MAJCOM representative will give the form to next en route command post. ***NOTE:*** This

report is designated emergency status code C1; continue reporting during emergency conditions, priority precedence. Submit data requirements in this category as prescribed or by any means possible to ensure arrival on the established due dates. Discontinue electronic reporting during MINIMIZE.

8.8. AMC Form 43, AMC Transient Aircrew Comments. Any crewmember may submit this form. It may be submitted even if an unsatisfactory item is not included in the AC's trip report. Complete AMC Form 43 and send it to HQ AMC/MWPS. ***NOTE:*** This report is designated emergency status code C2; continue reporting during emergency conditions, normal precedence. Submit data requirements in this category as prescribed or as soon as possible after submission of priority reports. Continue electronic reporting during MINIMIZE.

8.9. AMC Form 196, Aircraft Commander's Report on Crewmember. The AC will prepare this form on each crewmember whose performance was outstanding, below average, or unsatisfactory during a mission. Send the report to the commander of the unit to which the crewmember is assigned or attached for flying. The form should fully explain outstanding, below average, and unsatisfactory performance.

8.10. AMC Form 423, MIJI Incident Report Worksheet. The meaconing, intrusion, jamming, and interference (MIJI) reporting system identifies, analyzes, and disseminates information concerning MIJI incidents. Report all incidents through the OPREP system. Complete the worksheet and turn it in to base operations on landing.

Chapter 9

TRAINING REQUIREMENTS

9.1. Overview. This chapter outlines procedures, requirements, and restrictions for qualification, continuation training, and evaluation flights. Initial qualification, requalification, or upgrade training for pilots will not be conducted on missions with passengers onboard. Mission qualification training and evaluations may be conducted on missions with passengers onboard only if the individual in training is qualified (that is, has completed an aircraft check ride with a valid AF Form 8).

9.1.1. The instructor and/or flight examiner will make the final determination to fly or cancel a training mission in the event maintenance problems cause unacceptable delays and/or when weather is not suitable for the type training or evaluation to be done.

9.1.2. Touch-and-go landings with passengers or cargo are prohibited. ***NOTE:*** Maintenance and civilian employees under direct contract to the DoD and engaged in official direct mission support activities are considered mission essential and may be onboard when touch-and-go landings are performed.

9.2. Instructor Pilot Briefing. Before all training or evaluation missions, ACs, instructors, or flight examiners will brief their crews using locally developed briefing guides. Briefing guides will be approved by operations group commander or vice commander and will include (as a minimum) the following items:

9.2.1. Training or evaluation requirements. Instructors or evaluators will outline requirements and objectives for each student or examinee.

9.2.2. Planned training area and seat changes.

9.3. Debriefing. Following the mission overall training performed will be reviewed and evaluated. Each student must understand thoroughly what training has been accomplished and what maneuvers or areas, if any, require further training or study. Following the debriefing, all training will be documented on applicable forms.

9.4. Simulated Emergency Flight Procedures:

9.4.1. Conduct simulated emergency flight procedures according to AFI 11-202, Volume 3, and this AFI. Use a realistic approach and do not compound emergencies.

9.4.2. Use radar flight following to the maximum possible, consistent with training objectives.

9.4.3. Conduct simulated emergencies only during training and evaluation or currency flights when an instructor or flight examiner pilot is occupying one of the pilot seats. Instructor or flight examiner pilot candidates who occupy a pilot seat and are under the direct supervision of a flight examiner pilot not in a pilot seat may conduct simulated emergencies during initial and requalification upgrade evaluations.

9.4.4. Simulated single-engine maneuvers and no-flap approaches are not authorized at night or in IMC. Other simulated emergencies are limited to noncritical phases of flight and will be kept to a minimum during night or IMC.

9.4.5. Passengers are prohibited from training and evaluation or currency flights when simulated emergencies are practiced.

9.4.6. Notify the controlling agency when initiating an approach, landing, or missed approach in conjunction with a simulated emergency only when flying a nonstandard pattern requiring special sequencing.

9.5. Prohibited In-Flight Maneuvers. Practice the following maneuvers in the simulator only, unless specified in formal upgrade training syllabus: (***NOTE:*** Maneuvers required for FCFs or FCF training are authorized in flight.)

9.5.1. Simulated engine-out takeoff.

9.5.2. Full stall.

9.5.3. Dutch roll.

9.5.4. Jammed stabilizer approach and landing.

9.5.5. Split flap landing.

9.5.6. Landing with anti-skid off.

9.5.7. Landing with inoperative hydraulic system.

9.5.8. Aborted takeoff.

9.5.9. Unusual attitude.

9.5.10. Emergency descent.

9.5.11. Runaway pitch trim.

9.5.12. Emergency brake landing.

9.5.13. Simulated dual engine failure.

9.5.14. Actual engine shutdown.

9.5.15. Engine-out circling approach.

9.5.16. No-flap landing.

9.6. Touch-and-Go Landing Limitations. Observe the following limitations:

9.6.1. Touch-and-go landings will only be accomplished under the direct supervision of an instructor pilot.

9.6.2. Current and qualified instructor pilots are authorized to conduct or supervise touch-and-go landings under the following conditions:

9.6.2.1. Flight manual restrictions and procedures apply.

9.6.2.2. Wind restrictions, RCR and crosswind limits, and runway requirements in **Chapter 5** of this AFI are complied with. Do not exceed the normal or recommended zone of flight manual takeoff and landing crosswind component charts.

9.6.2.3. Reported ceiling or visibility values are at least 300-3/4 (RVR 40).

9.6.2.4. Wet runway or RCR must be a measured 9 or higher.

9.6.2.5. They are not done on slush covered runways.

9.6.2.6. Throttles are not placed in reverse during a touch-and-go landing. Rejected takeoffs will not be practiced.

9.6.2.7. Stop-and-go-landings are not authorized.

9.6.2.8. The minimum runway is in accordance with the aircraft performance manual or **Chapter 5** of this AFI, whichever is greater.

9.6.2.9. Touch-and-go landings may be performed by an instructor pilot, instructor pilot candidate on initial or requalification instructor pilot evaluation, or evaluation pilot from either seat.

9.6.2.10. Touch-and-go landings may be performed by any pilot from either seat provided an instructor pilot, instructor pilot candidate on initial or requalification instructor evaluation, or evaluator pilot is in the other seat.

9.6.3. Review the following for supervision of touch-and-go landings:

9.6.3.1. Flight manual procedures.

9.6.3.2. The importance of smooth application of power to the touch-and-go N1 setting while maintaining symmetric thrust as the throttles are advanced.

9.6.3.3. Engine failure, including recognition and corrective action.

9.6.3.4. Proper use of spoilers, flaps, trim.

9.6.4. To provide additional training flexibility, crews may perform multiple approaches. In addition, if the AC is an instructor, crews may perform touch-and-go landings on operational airlift missions if the following requirements are met:

9.6.4.1. Normal touch and go limitations apply.

9.6.4.2. All transition training will be accomplished during the first 12 hours of the FDP only.

9.6.4.3. As part of premission planning, the AC will contact parent wing current operations and obtain training mission numbers for use at each en route locations where training events are planned. In addition, the AC will coordinate with and receive approval from the airfields where training is to be done. He or she will then coordinate with the controlling agency to ensure adequate ground time is available at planned training locations to allow for planned training events, clearing customs, required crew rest, etc.

9.6.4.4. On initial arrival at the training location, the current line on the AFTO Form 781 will be closed out and the training time on the next line will be logged, using the appropriate training mission symbol and number.

9.6.5. Touch-and-go landings may be performed with MAJCOM-approved maintenance personnel onboard provided the mission is a designated training flight, an instructor or evaluator pilot is in command, and maintenance personnel are necessary for maintenance evaluations or inspections. Touch-and-go landings are not authorized with other passengers onboard.

9.7. Engine-Out Limitations:

9.7.1. Simulated engine failures are not authorized below safe single engine minimum control speeds when actual emergency condition exists, or during no-flap approach and landing. Landings may be performed with one thrust lever in idle. Simulated engine failure will not be initiated below 500-foot above ground level (AGL).

9.7.2. CPs will not practice simulated engine-out maneuvers in the aircraft until they are entered into a first pilot or AC upgrade program and approved by the unit commander.

9.8. Training Maneuver Restrictions. Adhere to the restrictions in **Table 9.1.** on all training flights and FCFs.

Table 9.1. Training Maneuver Restrictions.

ITEM	A Maneuver	B Altitude Restrictions	C Other Restrictions
1	Actual engine shutdown	5,000 feet AGL minimum	Do not practice actual engine shutdown unless for an FCF or for an FCF training flight or upgrade syllabus item (Day, VMC only).
2	Simulated emergency on takeoff or on approach	Initiate above 500 feet AGL	None.
3	Simulated engine-out go-around or missed approach	Initiate at or above 300 feet AGL	In the event of a go-around below the authorized missed approach altitude, use all engines.
4	Low approaches (personnel and/or equipment) on runway	Initiate at or above 500 feet AGL	None.
5	Planned VFR go-arounds with simulated emergencies other than engine out	Initiate at or above 100 feet AGL	None.
6	Steep turns	5,000 feet AGL minimum	Limited to day VMC conditions.
7	Approach to stalls, slow flight, and, flight on the back side of the power curve	10,000 feet AGL minimum	Limited to day VMC conditions.

9.9. Operating Limitations:

9.9.1. Unless specifically authorized elsewhere in this chapter, do not practice emergency procedures that degrade aircraft performance or flight control capabilities in flight. In an actual emergency, terminate all training and flight maneuvers practice. Resume training only when the pilot in command determines it is safe.

9.9.2. Fly option approach and visual low approaches according to restrictions in **Table 9.1.**

9.10. Simulated Instrument Flight. Artificial vision-restricting devices are not authorized for any phase of flight. A simulated instrument flight may be flown and logged without the use of a vision-restricting device.

Chapter 10

LOCAL OPERATING PROCEDURES

10.1. General. Units will define their operations procedures in this chapter.

Chapter 11

NAVIGATION PROCEDURES (NOT USED)

11.1. This Chapter Does Not Apply to CT-43 Operations.

Chapter 12

FLYING CREW CHIEF DUTIES AND RESPONSIBILITIES

12.1. General. This chapter outlines duties and responsibilities of CT-43 aircraft flying crew chiefs. The parent maintenance organization will schedule crew chiefs and provide the appropriate squadron operations section the name of the crew chief assigned to each mission. The crew chief will be listed on AMC Form 41, **Flight Authorization.**

12.2. Responsibilities. The crew chief is the primary aircraft mechanic and will perform maintenance to maintain a mission-ready aircraft status. After reporting for a mission, the crew chief will be responsible to the AC. The crew chief will:

12.2.1. Perform or assist with aircraft servicing at all stations.

12.2.2. Accomplish preflight, thru-flight and postflight inspections as required and assist pilots during their preflight as needed.

12.2.3. Perform maintenance at en route stations.

12.2.4. Perform aircraft block-out and block-in as required.

12.2.5. As the AC's representative, ensure inventory of life support equipment and dash-21 equipment is accomplished.

12.2.6. Maintain the AFTO Forms 781 series and inform the AC of all maintenance discrepancies entered in AFTO Form 781A.

12.2.7. Maintain the DD Form 1896.

12.2.8. Attend the AC's premission aircrew briefing and brief him or her on the status of the aircraft, recent maintenance history, and other concerns. Discuss requirements for AGE or special servicing needed at all stations. Confirm aircraft configuration.

12.2.9. For all departures, assure the required fuel load, as briefed by the AC, is aboard. Arrange aircraft taxing or towing to terminal or DV spots when required. Ensure required AGE is available and connected to aircraft. Assist in placing boarding steps or ramps in position and removing them when tasks are complete as required.

12.2.10. Perform in-flight maintenance to ensure DV and passenger comfort and optimum aircraft system operation.

12.2.11. For intermediate stops, chock aircraft, apply external power, and assist in positioning boarding steps and ramps as required. Perform or assist in all servicing operations and perform any required inspections. Ensure required AGE is available for departure.

12.2.12. For overnight stops, chock aircraft, apply external power, and assist in positioning boarding steps and ramps as required. Accomplish postflight inspections and perform or assist all servicing operations. Install engine, air conditioning, and pitot covers.

12.2.13. If maintenance is required, and at the AC's discretion, perform all maintenance that cannot be accomplished in flight at en route stations. If parts are required, use the MSK. Coordinate with the

AC before ordering or purchasing aircraft parts. Determine the part number, page number, and index number from the appropriate TO. The AC will determine the delivery location for all shipped parts.

12.2.14. On return to home station, comply with local debriefing requirements.

Chapter 13

FLIGHT ATTENDANT (FA) PROCEDURES

13.1. General. This chapter outlines FA procedures not in the aircraft flight manuals or elsewhere in this AFI.

13.2. Responsibilities. Primary flight attendant (that is, mission qualified flight attendant [MT]) responsibilities are to act as cabin representative of the AC, provide cabin service, instruct passengers in using emergency equipment when required, and direct and control passengers under emergency conditions. On multi-FA crews, the MT acts as FA supervisor and assigns specific duties and responsibilities to each FA.

13.3. Premission Duties. The MT will:

13.3.1. Contact the AC no later than 1 week prior to mission for draft itinerary times and any other information already received concerning cabin service requirements. He or she will anticipate meal requirements from the itinerary and draft menu items that may be provided as suggestions

13.3.2. Call the DV party's point of contact to determine DV requirements. He or she will obtain necessary funds and complete all portions of the AF Form 4084, **Mission Planning Worksheet.**

13.3.3. Conduct a briefing to assign FA positions and duties.

13.3.4. Ensure both CONUS and overseas crew billeting and transportation have been arranged and coordinate with mission contact officer.

13.4. Preflight Duties: The MT will:

13.4.1. Perform applicable preflight or thru-flight checklists. One or more FAs, as necessary, may accomplish these requirements.

13.4.2. Upload and stow food and fleet service items and assist in loading crew bags as necessary.

13.4.3. Prepare meals as required. Focus of preflight duties will be directed toward passenger service to ensure completion prior to stations time.

13.4.4. Coordinate receipt of passenger manifests.

13.4.5. Pick up or prepare passenger manifests as appropriate and turn in any required border clearance forms.

13.4.6. Coordinate passenger baggage loading and security. If loading space-available passengers at a facility without a passenger service section, perform anti-hijacking inspections as directed by the AC as follows:

13.4.6.1. Check for proper identification.

13.4.6.2. Check the FCG for appropriate entry or exit requirements and document passengers on AF Form 96, **Passenger Manifest.**

13.4.6.3. Inspect baggage in an area well away from the aircraft.

13.4.6.4. Load baggage to prevent in-flight passenger access (except for carry-on baggage).

13.4.6.5. Inspect carry-on baggage prior to boarding passengers.

13.4.7. Coordinate passenger boarding.

13.4.8. Brief passengers before takeoff, as directed by the AC, using locally developed briefing guides. Briefing guides will be approved by the operations group commander or deputy operations group commander.

13.5. Passenger Handling. Each FA will observe the following general rules:

13.5.1. Coordinate with the AC before answering questions about the mission.

13.5.2. Do not unduly alarm passengers by relaying details of abnormal conditions not readily discernible by passengers.

13.5.3. Keep the AC informed of all passenger problems, unusual requests, etc.

13.6. Border Clearance. Public Health, Customs, Immigration, and Agriculture require certain forms for border clearance. Consult the FCG for these requirements. The MT is responsible for ensuring the appropriate forms are onboard the aircraft and are completed. He or she will distribute appropriate forms to passengers and crewmembers for completion prior to landing.

13.7. En Route and Postflight Duties. The MT will:

13.7.1. Monitor the passenger cabin and assure passenger safety and comfort.

13.7.2. Prepare and serve meals, snacks, and beverages as required.

13.7.3. Distribute magazines, blankets, pillows, and other comfort items as needed.

13.7.4. Be attentive to passenger needs.

13.7.5. Prior to arrival at the border, complete border clearance forms as required.

13.7.6. Assist passenger deplaning.

13.7.7. Unload baggage and assist in its transfer to passengers transport.

13.7.8. Inspect the passenger cabin for personal items. If passenger baggage or personal items are left behind, inform the AC who will immediately take positive action to have the item delivered to the passenger.

13.7.9. Clean the passenger cabin, lavatories, and galley areas. Vacuum carpets, if necessary.

13.7.10. Arrange or procure food and beverages required for subsequent mission legs.

13.8. AF Form 4084, Mission Planning Worksheet. This form or another theater-approved form will help the FA organize passenger service requirements. The reverse of the form is a checklist to help inventory mission supplies. The unit may overprint local requirements on the reverse of the form.

13.9. AF Form 4085, Mission Expense Record:

13.9.1. This form or another theater-approved form will be used to record all expenses related to passenger services. Units may develop local procedures for form completion and mission expense procedures.

13.9.2. The MT will complete AF Form 4085 in four copies. Attach receipts for all expenditures. If unable to get a receipt from a vendor, the FA will prepare an itemized list of purchases and sign and date the list.

13.9.3. The AC and MT must sign the form. If an escort officer is not aboard, indicate in the applicable signature block, "not on board." Give the onboard contact the second copy.

13.9.4. Turn in the original, third copy, and fourth copy (along with receipts, passenger manifests, and a copy of the crew flight orders) to the FA superintendent for review and filing.

Chapter 14

COMMUNICATIONS SYSTEM OPERATOR (CSO) PROCEDURES

14.1. General. This chapter outlines CSO procedures not covered elsewhere.

14.2. Responsibilities. The CSO will:

14.2.1. Be responsible for inspecting, operating, and maintaining all communications-electronic equipment aboard the aircraft while on a mission.

14.2.2. Assure communications resources are available.

14.2.3. Monitor and safeguard classified material. Only CSOs are authorized access to the aircraft safe.

14.3. Premission Procedures. Include the Andrews AFB aeronautical station as an addressee on mission itinerary messages when special communication support is required. If the user has already coordinated required support, say so in the message.

14.4. Preflight Procedures. Accomplish these procedures according to directives.

14.5. In-Flight Procedures:

14.5.1. Ensure satellite communications (SATCOM), International Maritime Satellite Organization (INMARSAT), and HF voice circuits are available.

14.5.2. Transmit departure and arrival reports and other C2 communications.

14.5.3. Relay DV messages as required.

14.5.4. Receive and distribute message traffic. Ensure classified messages are stamped with applicable markings.

14.6. Postflight Procedures. After passengers have deplaned, inspect passenger compartments for classified material. Put classified waste in a destruction folder and store it until the mission is completed.

14.7. Postmission Procedures. Destroy classified waste and debrief applicable agencies.

Chapter 15

AIR REFUELING (NOT USED)

15.1. This Chapter Does Not Apply to CT-43 Operations.

Chapter 16

MISSION PLANNING (NOT USED)

16.1. This Chapter Does Not Apply to CT-43 Operations.

Chapter 17

EMPLOYING TACTICS TRAINING PROCEDURES

NOTE: Users should be aware that additions to any portion of this chapter could cause this instruction to become classified.

17.1. Tactics Ground Training Program. Each unit will have a tactics ground training program tailored to the unit's wartime taskings. Tactics and intelligence staff should join forces in this area to ensure success. Using a building block approach, the ground tactical training program forms the base of the unit's tactics program. Each unit's tactics ground training program may be different because of the differences between unit mission taskings, but the overall objectives should be the same.

17.2. Responsibilities. To ensure continuity and the unit's specific mission tasking are addressed, the tactics ground training program will be a coordinated effort between the unit's intelligence officer (IN), wing tactics, and DOT, DOV, and DOX (or their equivalents). The program is the responsibility of the squadron commander and will be run by the unit tactics program manager.

17.2.1. The unit tactics program manager will:

17.2.1.1. Be responsible for the development, maintenance, and currency of instructional materials used in the tactical training of crews. He or she will also be responsible for finding motivated, informed, and credible instructors to administer these materials.

17.2.1.2. Ensure the tactics training syllabus is comprehensive and covers all the aforementioned topics. More importantly, it is the manager's responsibility to infuse tactics throughout the unit's operations, through classes, and flight profiles and other proactive crewmembers with tactics mission planning and initiatives.

17.2.2. The unit tactics officer, with the IN's assistance, will develop procedures for timely dissemination of tactical and intelligence information to unit crewmembers as follows:

17.2.2.1. A tactics reference library should be maintained by the unit tactics officer. This library will provide study material at the unit level.

17.2.2.2. A by-subject tactics guide should also be developed and maintained by wing tactics and updated as materials are received.

17.2.2.3. The tactics read file should contain classified materials of timely interest to the aircrews. Read file may include messages, magazine articles, tactical analysis bulletins, etc.

17.3. Tactics Flight Training Program:

17.3.1. Scope. The tactics flight training program is designed to provide CT-43 crewmembers with the training necessary to confidently and successfully survive the wartime threat environment without endangering aircrews or aircraft in peacetime. This AFI attempts to point those maneuvers out, but maneuvers not specifically mentioned in this AFI will not be attempted without HQ AETC/DO approval.

17.3.2. Objectives. Flight training is the final phase of the tactics program. Its goal is to provide actual application of the tactics training concepts. Accomplish all flight maneuvers with strict adher-

ence to aircraft limitations as defined in TO IT-43A-1-3, *Partial Flight Manual, Aircraft 72-0283--USAF Series CT-43A Aircraft,* and this volume. The flight phase also involves a "walk before you run" philosophy.

17.4. Tactical Maneuvers. The maneuvers described below are basic tactical maneuvers. ***NOTE:*** Do not practice maneuvers other than these without HQ AETC/DO approval.

17.4.1. VFR Overhead. For the CT-43, primary use of the overhead pattern is expeditious landing of the aircraft when sequencing with recovering fighter traffic.

17.4.1.1. Limitations are as follows: maximum bank angle of 30 degrees; minimum weather VFR (maintain VMC); minimum altitude 1,500 AGL; and maximum speed of 250 KIAS.

17.4.1.2. Procedures are as follows:

17.4.1.2.1. Report 3 to 5 NMs initial for landing runway at 1,500 to 2,000 feet AGL, 230 to 250 KIAS, on tower frequency.

17.4.1.2.2. Break prior to approach end of runway (when numbers disappear under aircraft nose) unless compensating for known wind or traffic.

17.4.1.2.3. At breakpoint, set power to minimum spool EPR and initiate turn, using 30 degrees of bank. If above 1,500 AGL, establish a slight descent so 1,500 feet AGL is achieved prior to reaching perch point.

17.4.1.2.4. When aircraft speed reaches 195 KIAS, set flaps to 15 degrees.

17.4.1.2.5. Lower landing gear after rolling out on downwind. Accomplish before-landing checklist.

17.4.1.2.6. Deploy flaps to 25 degrees after gear is down and locked.

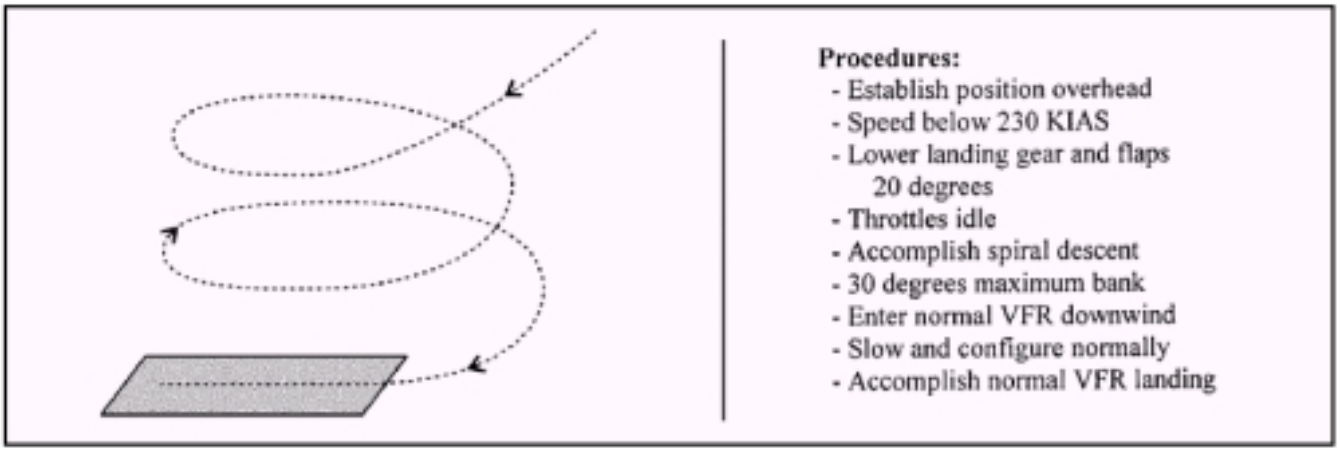
17.4.1.2.7. Maintain 1,500 AGL minimum on downwind until starting final turn.

17.4.1.2.8. From the perch point through final landing, use normal VFR pattern procedures.

17.4.2. Random Steep Approach (Figure 17.1.). Descending the turning approach is initiated from an altitude (typically above 5,000 feet) directly over an airfield. The approach involves multiple spirals over the airfield in order to rapidly lose altitude.

17.4.2.1. Limitations are a maximum bank angle of 30 degrees and minimum weather VFR (maintain VMC).

Figure 17.1. Random Steep Approach.



NOTE: Airspeeds, altitudes, and distances are approximate and may be adjusted to fit the tactical situation.

17.4.2.2. Procedures for the approach are as follows:

17.4.2.2.1. Establish position directly overhead the airfield. (The altitude depends on the threat.)

17.4.2.2.2. Configure with gear and flaps 40 degrees. Begin a right or left spiral turn using maximum 30 degrees of bank, throttles idle. Do not exceed 160 KIAS.

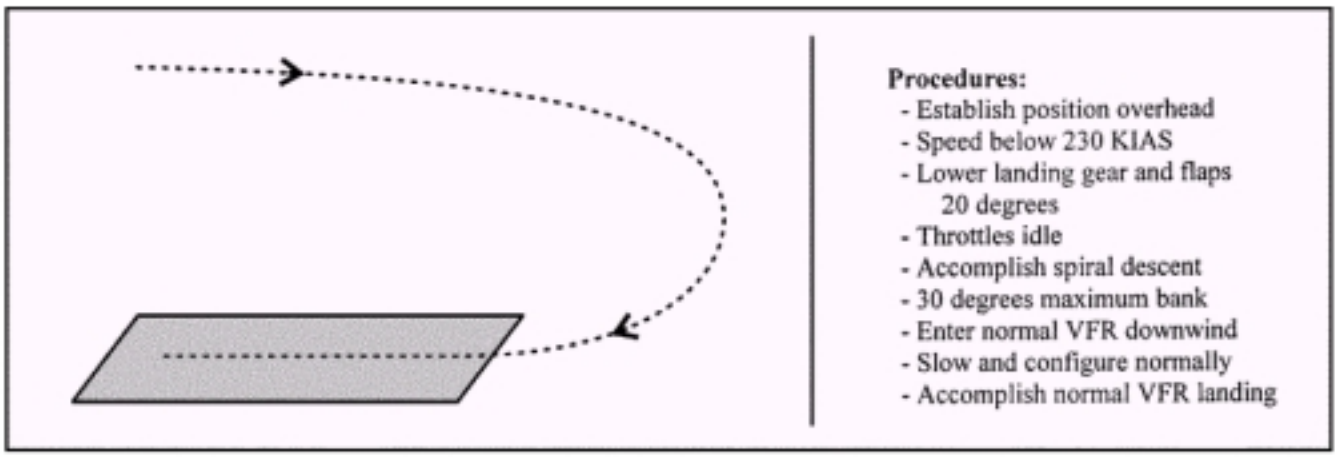
17.4.2.2.3. Plan rollout to enter a normal VFR base at 1,000 AGL minimum.

17.4.2.2.4. Engines must be spooled below 1,000 AGL.

17.4.2.2.5. From base turn through landing, use normal VFR pattern procedures.

17.4.3. Curvilinear Approach (Figure 17.2.). A curvilinear approach is a curving visual approach flown from any position other than a normal straight-in or downwind. Altitude, configuration, and sequence of events will vary. However, in all cases, plan the descent and flightpath to arrive at a 1/2 mile final on a normal glidepath (approx 150 feet AGL) with the aircraft configured for landing and the before-landing checklist completed.

Figure 17.2. Curvilinear Approach.



NOTE: Airspeeds, altitudes, and distances are approximate and may be adjusted to fit the tactical situation.

17.4.3.1. Limitations. Limitations are a maximum bank angle of 30 degrees and minimum weather VFR (maintain VMC).

17.4.3.2. Procedures:

17.4.3.2.1. From a position other than a straight-in final or normal VFR traffic pattern, configure the aircraft with flaps 25 degrees, gear down, prior to arrival at the "high key" point.

17.4.3.2.2. At "High Key", initiate a descending turn (may also be straight in).

17.4.3.2.3. Set power and flaps as required, to maneuver to roll out on final at a normal glidepath in the landing configuration. Do not exceed 1000 fpm descent rate below 1000 feet AGL.

17.4.3.2.4. Perform normal landing.

17.4.4. Spiral-Up (Random Steep) Departure. A maximum angle of climb departure is used to gain altitude prior to departing a secure perimeter.

17.4.4.1. Limitations. Limitations are a maximum bank angle is 15 degrees until reaching VMin for the existing configuration.

17.4.4.2. Procedures:

17.4.4.2.1. Use normal procedures throughout liftoff.

17.4.4.2.2. Raise gear, leave slats extended and flaps at takeoff setting, and climb out at VMin for the flap setting until 3,000 feet AGL.

17.4.4.2.3. Climbout may be straight or turning, depending on threat location. Do not exceed 15 degrees of bank until reaching VMin. Thereafter, do not exceed 30 degrees of bank.

17.4.4.2.4. At 3,000 feet AGL, lower the nose, accelerate, raise flaps and slats, and continue the climb, using the appropriate procedure. If a continued high angle of climb is required, climb at 210 KIAS to 15,000 feet MSL and 250 KIAS thereafter. Otherwise resume normal climb profile.

17.4.5. ATC Coordination. In all cases, units should coordinate these procedures with the local ATC at any location where these maneuvers will be flown. Do not fly these procedures at uncontrolled fields unless called for in actual operations.

17.5. Exercises:

17.5.1. Scope. Exercises provide realistic combat-scenario training. This training is representative of the unit mission tasking. Unit planner will ensure exercises are planned and flown to maximize training objectives.

17.5.2. Objectives. Tactics training will be built into each exercise during the planning stage. Training objectives include, but are not limited to, AWACS interface, tactical deception, threat advisories, and defensive tactics. Consider the following elements during exercise planing:

17.5.2.1. Use warning, alerting, deployment and execution orders.

17.5.2.2. Send theater ATOs secure by STU III and fax at least one day during the exercise.

17.6. Hostile Fire Entry and Exit Checklists:

17.6.1. These checklists provide a means of placing the aircraft into a configuration that is as survivable as possible if the aircraft sustains ground fire.

17.6.2. **Attachment 2** contains a hostile fire entry checklist; **Attachment 3** contains a hostile fire exit checklist. Both attachments contain checklists for cockpit and cabin crews. (Units may reproduce these checklists for inclusion in handheld checklists as inserts.)

17.6.3. The hostile fire entry checklist will be initiated by the AC not later than 30 minutes prior to entering the threat area. Timely communication of threat sightings by observers to the pilots is critical. The AC will direct crewmembers to complete the hostile fire exit checklist when the aircraft is clear of the threat area.

Chapter 18

AIRCRAFT FORMATION (NOT USED)

18.1. This Chapter Does Not Apply to CT-43 Operations.

Chapter 19

AIR DROP (NOT USED)

19.1. This Chapter Does Not Apply to CT-43 Operations.

Chapter 20

AEROMEDICAL EVACUATION (NOT USED)

20.1. This Chapter Does Not Apply to CT-43 Operations.

Chapter 21

SEARCH AND RESCUE (NOT USED)

21.1. This Chapter Does Not Apply to CT-43 Operations.

Chapter 22

EMERGENCY NUCLEAR AIRLIFT (ENAF) (NOT USED)

22.1. This Chapter Does Not Apply to CT-43 Operations.

Chapter 23

AIRCREW CHEMICAL OPERATIONS AND PROCEDURES

23.1. General:

23.1.1. Although CT-43 crews should not be tasked to fly into a chemically or biologically contaminated area, they may operate in areas within range of a chemical or biological attack. This AFI is intended to enhance other chemical defense training and provide crewmembers a basic understanding of utilizing the ground crew ensemble (GCE) in a chemical-biological threat area (CBTA). It combines information from TOs and unit inputs to form a single source document.

23.1.2. This chapter briefly describes the nature of the chemical threat and agents that may be faced. It also discusses some of the situations and problems the aircrew may encounter in a CBTA. Preparatory actions and countermeasures are examined so the crewmember can make optimal use of the GCE.

23.2. Factors Influencing the Chemical Warfare (CW) Agent Hazard. The major instances in which a crew may be exposed to chemicals is through inhalation, absorption through the skin and eyes, and ingestion. Contaminated drink and food are considered harmful, but immediate concerns must be to avoid contamination to the maximum extent, limit exposure of the skin and eyes, and avoid breathing the contaminates. Factors affecting persistence are weather, agent physical characteristics, method of dissemination, droplet size, as well as surface and terrain.

23.2.1. Weather. Factors include temperature, wind, humidity, precipitation and atmospheric stability. For example, high winds and heavy rains reduce the contamination hazard. Conversely, lack of wind, overcast skies, and moderate temperatures favor persistence.

23.2.2. Agent Dissemination. Agents can be disseminated as vapors, aerosols, or liquids. Solids seem unlikely, but agents may become solids at lower temperature.

23.2.3. Agent Droplet Size. The persistence factor is determined by the droplet size. Agents may be mixed with other chemicals (thickeners), and form large drops, making removal more difficult.

23.2.4. Surface and Terrain. CW agent clouds tend to follow the terrain, flowing over the countryside and down valleys. Chemicals persist in hollows, depressions, and other low areas. Rough terrain retards cloud movement. Flat countryside allows a uniform, unbroken cloud movement and vegetated areas are more contaminated than barren terrain. Liquid agents soak into porous surfaces, making evaporation much slower than for nonporous surfaces.

23.3. Categories of CW Agents. CW agents having military significance may be categorized as nerve, blister, choking, and blood. Because they are produced biologically, toxins are technically not chemical agents, but they are considered a potential CW threat. Paragraphs **23.4.** through **23.7.** contained detailed information about the four CW agents.

23.4. Nerve Agents:

23.4.1. Military Significance. Nerve agents are the most lethal and fastest acting of the standard CW agents. These agents affect the nervous system and are highly toxic whether inhaled, ingested, or absorbed through the skin. Persistency ranges from hours to many days.

23.4.2. Symptoms of Exposure. Nerve agent exposure is difficult to distinguish. Symptoms include a runny nose, tightness of the chest, difficulty breathing, excessive sweating, drooling, nausea, vomiting, diarrhea, and convulsions. Nerve agents can also cause muscular twitching, dimness of vision, and pinpointing of the pupils.

23.4.3. Onset of Symptoms. Inhalation produces symptoms within 1 to 2 minutes, and the victim may be incapacitated within 5 to 10 minutes. Death may occur after several hours or days. Ingestion may cause the same symptoms, but incapacitation may take longer. Because nerve agents are retained by the body for an extended period, are intermittent, cumulative exposure to low amounts can lead to the same result as a single exposure to a higher amount.

23.4.4. Protection. The full protective ensemble is effective against nerve agents. When properly worn, the various chemical protective masks prevents inhalation of nerve agents. Both the aircrew coveralls and GCE provide limited protection to the skin. All layers of the outer garment must be protected against saturation of liquids, chemical agents, water, or petroleum.

23.4.5. Antidotes and Prophylaxis. Antidotes are effective in combating the effects of nerve agent exposure. These antidotes may be effective if given to a victim having advanced symptoms, as long as the victim is made to continue breathing. People who use the antidotes must be seen by medical personnel and may not be combat-ready for several days. Currently, nerve agents are the only agents for which a field antidote is available. This antidote can be self-administered by the exposed individual or through self-aid buddy care. In addition, medical personnel have more specialized treatments available.

23.5. Blister Agents:

23.5.1. Military Significance. Blister agents are dispensed as vapors or liquids, and they may be encountered as solids. These agents primarily affect the eyes, respiratory tract, and skin.

23.5.2. Symptoms of Exposure. Placed on the skin, a drop the size of a pin head can produce a blister 1 inch in diameter. Because this action is accentuated by moisture, a more severe danger is present during periods of sweating. The groin and armpits, which tend to be sweaty, are especially susceptible to blister agents. Blister agents that come in contact with the eyes lead to redness and watering of the eyes, blurring of vision, sensitivity to light, and, frequently, blindness. Inhalation causes serious damage due to burns and blisters to the mouth, nose, throat, and lungs. Incapacitation may last for days or weeks. Therefore, aircrews will probably be unable to fly for indefinite periods. Even after hospitalization, complications from blister agent exposure can arise and may be fatal.

23.5.3. Onset of Symptoms. Blister agents are quickly absorbed through the skin. However, it usually takes from up to 5 minutes to as long as several hours for the symptoms to appear. Blister agents act most rapidly in liquid form, but are also effective in vapor form.

23.5.4. Protection. The full protective ensemble is effective against blister agents. Exposed areas must be cleaned thoroughly immediately after exposure. Blister agents are easily transferred from contaminated surfaces; therefore, great care must be taken to avoid contact with any contamination.

23.6. Choking Agents:

23.6.1. Military Significance. These agents are disseminated as vapors and, when inhaled, affect the respiratory system by damaging the lungs. Persistence is very brief, and they dissipate rapidly (within minutes) under most field conditions.

23.6.2. Symptoms of Exposure. Choking agents cause coughing, choking, tightness of the chest, nausea, headache, and watering of the eyes. Choking agents can be lethal because they normally fill the lungs with fluids, making breathing difficult or impossible.

23.6.3. Onset of Symptoms. Exposure to a choking agent has an immediate effect. Victims experience slightly delayed effects, such as painful cough, breathing discomfort, and fatigue.

23.6.4. Protection. Both the aircrew and ground crew protective masks are extremely essential to protect against exposure. In fact, the entire protective ensemble should be used as directed.

23.7. Blood Agents:

23.7.1. Military Significance. Blood agents are usually dispensed as vapor or aerosol and inhaled. Under most field conditions, they may briefly persist on target (up to 10 minutes).

23.7.2. Symptoms of Exposure. Exposure to a single breath of blood agent will cause giddiness, headaches, confusion, and nausea. As the dose increases, breathing will become more difficult. The victim will have deep, uncontrollable breathing and cramps; then he or she will lose consciousness. Death is certain if the victim does not receive medical aid.

23.7.3. Protection. Blood agents are breathing hazards. The full ensemble is most effective because the mask provides the necessary breathing protection.

23.7.4. Additional Threats. Blood agents will damage mask filters. Personnel must change mask filters at the earliest possible opportunity after a blood agent attack. ***EXCEPTION:*** Filters installed in aircrew CRU-80/P filter packs will be removed and replaced by aircrew life support personnel (AFSC 1T1X1).

23.8. Aircrew Operations. Performance of duties while wearing chemical defense equipment can be extremely physically and mentally demanding. Special preparation and crew coordination are required to operate under chemical conditions. The following information will help aircrews successfully operate in a chemical environment by recognizing limits and exploiting the capabilities of the chemical defensive equipment:

23.8.1. Nonflying Ground Operations . Ground operations can represent the highest threat to aircrew safety. Protection from enemy attacks and exposure to liquid chemical agents is paramount. Aircrew should be advised to limit their activities to essential duties only and to separate ground duties from air duties. The GCE is designed for quick donning and heavier levels of concentrations that can be more evident during ground operations. The aircrew chemical defense ensemble (ACDE) is designed for the unlikely event of light concentration levels that might be found during flying operations and transmitted to and from the aircraft.

23.8.2. Body Temperature and Fluids Control. Heat stress and dehydration are serious hazards while wearing the ACDE. Aircrew members must control perspiration rates and limit their activities to essential duties only. It is essential to consciously slow the work pace while performing physical labor, share the workload, and monitor each other's physiological condition.

23.8.3. Restricted Communications. Normal communications are limited while wearing the chemical defense mask. Communications can be enhanced by using the miniamplifier or speaker with the mask. Otherwise, visual signals may be used to compensate.

23.9. Limitations:

23.9.1. Aircrews must be mentally prepared to face the dangers of chemical weapons. Flight planning must be thorough, and ACs should emphasize chemical defensive operations during mission planning, hazards and countermeasures, plans for onload and offload in the event of a ground attack, and plans for the return leg in the event of a contaminated aircraft. Alternate scenario plans should also be considered in the event conditions change.

23.9.2. Wearing any of the chemical defense masks or filter assemblies imposes the following limitations:

23.9.2.1. The mask or filter assembly prevents the detection of fumes from fuel, hydraulic fluid, and oil.

23.9.2.2. The filter assembly will not protect the user against ammonia fumes and carbon monoxide gas.

23.10. GCE Issue. Aircrews will be issued sized GCEs at their home station. They will check mobility bag contents and correct sizes and ensure their GCE is available at all times while in a CBTA.

23.11. CBTA Operations:

23.11.1. Establishing a Threat Level. Aircrews should monitor C2 channels to ensure they receive the latest information concerning the destination's alert condition. Diversion of AMC aircraft to alternate "clean" locations may be required unless operational necessity dictates. The local AMC C2 center will direct aircrews to undergo medical pretreatment for chemical exposure.

23.11.2. Protective Equipment Postures. Standardized Air Force alert conditions and recommended ACDE requirements are listed below based on a chemical-biological threat. ***NOTE*:** These alarms may be different based on the host country requirements.

23.11.2.1. "ALL CLEAR" means an attack is not probable nor is chemical-biological contamination present. Notification--verbal or removal of warning flags and placards. GCE requirements--equipment will be issued, prepared, and readily available.

23.11.2.2. "ALARM YELLOW" means an attack is probable. Notification--verbal or posting of yellow warning flags or placards. GCE requirements--appropriate components should be worn and the mask or hood should be immediately available commensurate with ground duties.

23.11.2.3. "ALARM RED" ("ALARM BLUE" in Korea) means an attack is imminent or in progress. Notification--verbal, posting of red warning flags or placards, or a 1-minute warbling tone on siren (3 seconds on, 1 second off). Aircraft inbound will hold or divert. On the ground, personnel will take immediate cover and don full GCE.

23.11.2.4. "ALARM BLACK" means contamination is suspected or present. Notification--posting of black warning flags or placards or a warbling tone on siren (1 second on, 1 second off). GCE requirements--full ensemble will be worn. Personnel will remain indoors or under liquid agent cover.

23.12. Donning Equipment. Aircrew will don GCE based on the alarm condition. When wearing the GCE, Atropine and 2 PAM Chloride auto injectors will be kept in the upper left pocket. This standardized location will allow personnel to locate the medication should an individual be overcome by nerve agent

poisoning. M-9 paper on the GCE will facilitate detection of liquid chemical agents and ground crew contamination control area (GCCA) processing. M-9 paper should be placed on the GCE prior to entering a CBTA when an "alarm yellow" or higher has been declared. When inbound to the CBTA and prior to descent, the AC will ensure crew and passengers don appropriate protective equipment according to arrival destination's mission-oriented protective posture level and brief aircrew operations in the CBTA. As a minimum, this briefing will include flight deck isolation, oxygen requirements, air conditioning system requirements, CW clothing requirements, ground operations, and MOPP levels.

23.13. Ground Operations:

23.13.1. Off and On Considerations. During ground operations, extreme care must be taken to prevent contamination of aircraft interiors, particularly the flight deck area. Reduce the number of personnel entering the aircraft. Do not place contaminated engine covers, safety pins, or chocks in the aircraft unless they are sealed in clean plastic bags.

23.13.2. Physiological Factors. The AC must be very sensitive to problems resulting from physical exertion while wearing GCE. The AC should consider factors such as ground time, temperature, and remaining mission requirements when determining onload or offload requirements. Individuals should be closely monitored for adverse physiological effects.

23.13.3. Communications. Conducting onloading or offloading operations while wearing the complete ACDE complicates communications capability. Use the miniamplifier or speaker or the aircraft PA system and augment it with flashlight and hand signals as required.

23.14. Chemical Attack During Ground Operations. If an attack ("alarm red") occurs during onloading or offloading operations or transport to and from aircraft, take immediate cover away from the aircraft or vehicle. Don the full GCE. ***NOTE:*** Aircrews should forward information concerning medical aid, damage estimates, and unexploded ordinance. Appropriate information may be forwarded via the aircraft radios to controlling agencies.

23.15. Crew Rest Procedures. Because CT-43 aircrews are prohibited from flying contaminated aircraft, it may become necessary for the aircrew to rest in a contaminated CBTA. Personnel caught in a chemical attack will be airlifted out of the CBTA as a lift becomes available.

23.16. Contamination Control Areas (CCA) Procedures. CT-43 aircrews will proceed to the GCCA for processing. All personnel will remove protective clothing according to procedures located in the GCCA. ***NOTE:*** Do not proceed to the aircrew contamination control area. This area is used solely to decontaminate personnel wearing the ACDE.

23.17. Work Degradation Factors. Work timetables need to be adjusted to minimize thermal stress caused by wearing the GCE. The following are degradation factors for wearing full GCE. To estimate how much time it takes to perform a task or operation, take the task time multiplier for the appropriate work rate and ambient air temperature and multiply it by the time it normally takes to perform the task. For example, given a heavy work rate and an air temperature of 70 ^{O}F, a crewmember should expect a normal 1-hour task to take 2.1 hours while wearing ACDE (**Table 23.1.**). A more extensive discussion of this subject is found in AFMAN 32-4005, *Personnel Protection and Attack Actions.*

Table 23.1. Task Time Multipliers.

ITEM	A	B	C	D
	Work Rate	Temperature		
		20 to 49 ^{o}F	50 to 84 ^{o}F	85 to 100 ^{o}F
1	Light	1.2	1.4	1.5
2	Moderate	1.3	1.4	3.0
3	Heavy	1.7	2.1	5.0

Chapter 24

SPECIAL OPERATIONS LOW LEVEL (SOLL) II (NOT USED)

24.1. This Chapter Does Not Apply to CT-43 Operations.

Chapter 25

CONFIGURATION (NOT USED)

25.1. This Chapter Does Not Apply to CT-43 Operations.

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

FAA Handbook 8260.3B, *Standard for Terminal Instrument Procedures*

Federal Aviation Regulation (FAR)

JCS Pub 6-0, *Doctrine for Command, Control, Communications, and Computer (C4) Systems Support to Joint Operations*

MIL-STD 461E, *Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment*

DoD 4515-13R, *Air Transport Eligibility*

DoD Flight Information Publication (FLIP)

DoD Foreign Clearance Guide (FCG)

AFMAN 10-206, *Operational Reporting*

AFPD 11-2, *Aircraft Rules and Procedures*

AFH 11-203, Volume 1, *Weather for Aircrews*

AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*

AFI 11-202, Volume 3, *General Flight Rules*

AFJI 11-204, *Operating Procedures for Aircraft Carrying Hazardous Materials*

AFI 11-209, *Air Force Participation in Aerial Events*

AFI 11-215, *Flight Manuals Program (FMP)*

AFMAN 11-217, Volumes 1 and 2, *Instrument Procedures Flight Procedures*

AFJMAN 11-226, *United States Standard for Terminal Instrument Procedures (TERPS)*

AFI 11-281, *Aircraft Operations and Movement on the Ground*

AFI 11-401, *Flight Management*

AFI 13-207, *Preventing and Resisting Piracy (Hijacking)*

AFI 13-401, *Managing the Information Security Program*

AFI 21-101, *Maintenance Management of Aircraft*

AFMAN 23-110, Volume 1, Part 3, *Air Force Stock Fund and DPSC Assigned Item Procedures*

AFI 23-202, *Buying Petroleum Products and Other Supplies and Services Off-Station*

AFJMAN 24-204, *Preparing Hazardous Materials for Military Air Shipments*

AFI 31-101, *Air Force Installation Security Program*

AFI 31-207, *Arming and use of Force by Air Force Personnel*

AFMAN 32-4005, *Personnel Protection and Attack Actions*

AFI 34-219, *Alcoholic Beverage Program*

AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*

AFJI 48-104, *Quarantine Regulations of the Armed Forces*

AFI 48-123, *Medical Examinations and Standards*

AFI 91-202, *The US Air Force Mishap Prevention Program*

AFI 91-204, *Safety Investigations and Reports*

AFOSH Standard 91-100, *Aircraft Flight Line-Ground Operations and Activities*

TO-00-20-6, *Inspection System, Documentation, and Status Reporting for Ground-Launched Missiles and Their Trainers, SE, and Ground C-E Equipment*

TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*

TO 1-1-300, *Acceptance/Functional Check Flight and maintenance Operations Checks*

TO 1T-43A-1, *Flight Manual--USAF Series T-43 Aircraft*

TO IT-43A-1-1, *Flight Manual-USAF Series T-43A Aircraft, Performance Data*

TO-1T-43A-1CL-1, *Pilots Abbreviated Flight Crew Checklist--USAF Series T-43A Aircraft*

TO 1T-43A-1-3, *Partial Flight Manual, Aircraft 72-0283--USAF Series CT-43A Aircraft*

TO 1T-43A-6CF-1, *Acceptance and Functional Check Flight Checklist T-43A*

Abbreviations and Acronyms

AC—aircraft commander

ACDE—aircrew chemical defense ensemble

ACF—acceptance check flight

ACFP—advanced computer flight planning

ADF—automatic direction finding

ADIZ—air defense identification zone

AFCS—automatic flight control system

AFOSI—Office of Special Investigations

AFRC—Air Force Reserve Command

AFSOUTH—Air Force Southern Command

AGE—aerospace ground equipment

AGL—above ground level

AIR—aviation into-plane reimbursement

AIREP—air report

ALS—approach lighting system

AMC—Air Mobility Command

AMCC—air mobility control center

AME—air mobility element

AMOCC—air mobility operation control center

AMSS—air mobility support system

ANGRC—Air National Guard Readiness Center

AOC—air operations center

AOR—area of responsibility

APCC—aerial port control center

APU—auxiliary locator transmitter

ASRR—airfield suitability and restrictions report

ATC—air traffic control

ATIS—automatic terminal information service

ATO—air tasking order

ATOC—air terminal operations center

AVFUEL—aviation fuel

AWACS—airborne warning and control system

BASH—bird aircraft strike program

BWC—bird watch condition

C2—command and control

C2IPS—Command and Control Information Processing System

CB—citizens band

CBTA—chemical-biological threat area

CCT—combat control team

CDT—crew duty time

CFP—computerized flight plan

CIRVIS—communications instructions reporting vital intelligence sightings

COMSEC—communications security

CP—copilot

CPI—crash position indicator

CRM—crew resource management

CSD—constant speed drive

CSO—communications system operator

CVR—cockpit voice recorder

CW—chemical warfare

DCS—Defense Courier Service

DER—departure end of runway

DFSC—defense fuel supply center

DH—decision height

DIRMOBFOR—director of mobility forces

DP—departure procedure

DSN—defense switching network

DV—distinguished visitor

EFTO—encrypt for transmission only

EGT—engine gas temperature

ELT—emergency locator transmitter

ENAF—emergency nuclear airlift

EPR—engine pressure ratio

ETA—estimated time of arrival

ETB—estimated time in block

ETD—estimated time of departure

ETIC—estimated time in commission

ETP—equal time points

FA—flight attendant

FAA—Federal Aviation Administration

FBI—Federal Bureau of Investigation

FCB—flight crew bulletin

FCF—functional check flight

FCG—foreign clearance guide

FCIF—flight crew information file

FDR—flight data recorder

FIR—flight information region

FL—flight level

FMC—fully mission capable

FMS—flight management system

FOD—foreign object damage

FOP—flight duty period

FOUO—for office use only

FP—first pilot

FSS—forward supply system

FT—first flight attendant

GBTA—chemical-biological threat area

GCCA—ground crew contamination control area

GCE—ground crew ensemble

GDSS—global decision support system

GNC—global navigation chart

GPWS—ground proximity warning system

HAA—height above airport

HF—high frequency

HF—high frequency

ICAO—International Civil Aviation Organization

ICS—infant car seat

IFF/SIF—identification friend or foe/selected identification features

IFR—instrument flight rules

IMC—instrument meteorological conditions

IN—intelligence office (in this context)

INMARSAT—International Maritime Satellite Organization

INS—inertial navigation system

JNC—jet navigational chart

JOSAC—joint operational support airlift center

KIAS—knots indicated airspeed

LPU—lift preserver unit

LRC—long range cruise

MAF—mobility Air Force

MCD—medical crew director

MC—mission contributing

MDA—minimum descent altitude

MDS—mission design series

MEA—minimum en route altitude

MEGP—mission essential ground personnel

ME—mission essential

MESL—minimum essential subsystem list

MIJI—meaconing, intrusion, jamming, and interference

MILSTAMP—military standard transportation and movement procedures

MNPS—minimum navigation performance specifications

MOA—memorandum of agreement

MOCA—minimum obstruction clearance altitude

MOPP—mission-oriented protective postures

MP—mission pilot

MSK—maintenance spares kit

MSL—mean sea level

NAF—numbered Air Force

NAVAID—navigational aid

NDB—nondirectional beacon

NEW—net explosives weight

NMCS—nonmission capable supply

NM—nautical mile

NOTAM—notice to airmen

NSN—national stock number

OIS—obstacle identification surface

ONC—operational navigation chart

OPLOC—operating location

OPREP—operational report

OSA—operational support airlift

PACAF—Pacific Air Force

PAPI—precision approach path indicator

PA—public affairs

PAR—precision approach radar

PEID—program element identifier

PIC—pilot in command

PMCR—postmission crew rest

PMSV—pilot-to meteorologist service

POL—petroleum, oil, and lubricant

RA—resolution advisory

RAT—ram air temperature

RCR—runway condition reading

RCR—runway condition reading

recap—recapitulation

RON—remain overnight

RSC—runway surface condition

RST—Raven security team

RSVM—reduced vertical separation minimum

RVR—runway visual range

RVSM—reduced vertical separation minimum

SATCOM—satellite communications

SAT—satellite

SID—standard instrument procedure

SID/DP—standard instrument departure/departure procedure

SIGMET—significant meteorological information

SITCO—Shell International Trading Company

SM—statute mile

SOLL—special operations low level

STAR—standard terminal arrival route

STM—supplemental training mission

TACC—tanker airlift control center (AMC)

TALCE—tanker airlift control element

TCAS—traffic collision avoidance system

TOLD—takeoff and landing data

TO—technical order

TPC—tactical pilotage chart

UHF—ultra high frequency

UIR—upper information region

USAFE—US Air Forces in Europe

USAF—United States Air Force

USA—United States Army

USMC—United States Marine Corp

USN—United States Navy

USTRANCOM—US Transportation Command

VASI—visual approach slope indicator

VFR—vertical flight rules

VHF—very high frequency

VMC—visual meteorological conditions

VOR—very high frequency (VHF) omnidirectional range

VVIP—very very important part

WBC—weight bearing capacity

Terms

NOTE: The following is a list of terms commonly used in the aviation community. Additional terms may be found in the FAR, Part 1, and DoD FLIP, General Planning, Chapter 2.

Advance Notice Message—A message dispatched when required by the FCG to provide advance notification to interested agencies of mission itinerary and support requirements. It may be combined with a diplomatic clearance request message.

Air Force Component Commander (AFCC)—In a unified, subunified, or joint task force command, the Air Force commander charged with the overall conduct of Air Force air operations.

Airlift—Aircraft is considered to be performing an airlift when manifested passengers or cargo are carried.

Air Mobility Control Center (AMCC)—Provides global coordination of tanker and airlift for AMC and operationally reports to the AMC TACC. Functions as the AMC agency that manages and directs ground support activities and controls aircraft and aircrews operating AMC strategic missions through overseas locations.

Air Mobility Element (AME)—Command and control center deployed in theater under the control of the director of mobility forces (DIRMOBFOR), where detailed planning, coordinating, and tasking for theater tanker and airlift operations are accomplished. The AME is the focal point for communications and the source of control and direction for theater tanker and airlift forces.

Antarctic Flight—Flight conducted south of 56 degrees south latitude.

Arctic Flight—Flight conducted between 15 degrees and 180 degrees west longitude (exclusive of Iceland) north of 50 degrees north latitude between 1 October and 15 April. Transoceanic flights are excluded.

Arrival Time—The block-in time, rather than the landing time.

Air Route Traffic Control Center (ARTCC)—A facility that provides ATC services to aircraft operating on IFR flight plans within controlled airspace and principally during the enroute phase of flight.

Air Traffic Control (ATC)—A service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.

Bird Aircraft Strike Hazard (BASH)—An Air Force program designed to reduce the risk of bird strikes.

Bird Condition Low—No significant bird activity which would present a probable hazard to flying operations. No operating restrictions.

Bird Condition Moderate—Concentrations of 5 to 15 large birds (waterfowl, raptors, gulls, etc.) or 15 to 30 small birds (terns, swallows, etc.) observable in locations that represent a probable hazard to flying operations.

Bird Condition Severe—Concentrations of more than 15 large birds (waterfowl, raptors, gulls, etc.) or more than 30 small birds (terns, swallows, etc.) observable in locations that represent a probable hazard to flying operations.

Block Time—Time determined by the scheduling agency responsible for mission accomplishment for the aircraft to arrive at (block in) or depart from (block out) the parking spot. The 89 AW further defines "Block Time" as the time the door will open on arrival.

BLUE BARK—US military personnel, US citizen civilian employees of DoD, and the dependents of both categories who travel in connection with the death of an immediate family member. It also applies to escorts for dependents of military members traveling under competent orders.

Border Clearance—Those clearances and inspections required to comply with federal, state, and local agricultural, customs, immigration, and immunizations requirements.

Category I Route—Any route that does not meet the requirements of a category II route, including tactical navigation and over water routes.

Category II Route—Any route on which the position of the aircraft can be accurately determined by the overhead crossing of a radio aid (NDB, VOR, TACAN) at least once each hour with positive course guidance between such radio aids.

CLOSE HOLD—An USAF/CVAM term assigned to all aspects of a SAM when destination, passengers' names, or other mission details are restricted from general release.

COIN ASSIST—Nickname used to designate dependent spouses accompanying dependent children and dependent parents of military personnel reported missing or captured who may travel space available on military aircraft for humanitarian purposes on approval of the Chief of Staff, United States Army; Chief of Staff, United States Air Force; Chief of Naval Operations; or the Commandant of the Marine Corps.

Command and Control (C2)—Exercise of direction and authority over assigned forces by a properly designated command echelon in the accomplishment of the mission.

Command and Control Center (C2 Center)—Each C2 center provides supervision, guidance, and control within its assigned area of responsibility. For the purpose of this AFI, C2 centers include operations centers, command posts, air mobility elements, tanker airlift control elements (TALCE), air mobility control centers, and tanker task forces.

Command and Control Information Processing System (C2IPS)—Computer-based information transmission and information handling for command and control functions associated with the DIRMOBFOR, AME fixed units, and TALCE. Interfaces to and automatically updates the Global Decision Support System (GDSS).

Communications Systems Operator (CSO)—Flight crewmember responsible for inspecting, operating, and maintaining all communications and electronic equipment aboard the aircraft. See **Chapter 14** of this AFI for an amplified explanation.

Conference Skyhook—A communications conference available to help aircrews solve in-flight problems that require additional expertise.

Contingency Mission—Mission operated in direct support of an OPord, OPlan, disaster, or emergency.

Critical Leg—The segment of a mission that determines the ACL which may be carried over that route.

Critical Phase of Flight—Takeoff, air refueling, formation below minimum safe altitude, low level, air drop, approach, and landing.

CVAM (Special Air Missions Office)—Agency within the office of the USAF Vice Chief of Staff responsible for scheduling and committing all Air Force airlift required to support the White House or any other executive branch of the government. This office is the single coordinating agent for the SAM aircraft fleet and schedules 89 AW special air missions.

Deadhead Time—Duty time for crewmembers in passenger status, positioning or de-positioning for a mission or mission support function.

Departure Time—The block-out time, rather than the takeoff time.

Designated Courier—Officer or enlisted member in the grade of E-5 or above of the US Armed Forces, or a Department of State diplomatic courier, selected by the Defense Courier Service (DCS) to accept, safeguard, and deliver DCS material as directed. A primary crewmember should be used as a courier only as a last resort.

Diplomatic Clearance Request Message—A message dispatched to request diplomatic clearance for overflight and/or transit of foreign territories. Message content and addresses are specified in the FCG. This message is usually combined with the advance notice message.

Direct Instructor Supervision—Supervision by an instructor of like specialty with immediate access to controls (for pilots, the instructor must occupy either the pilot or copilot seat).

Director of Mobility Forces (DIRMOBFOR)—An individual in command of all mobility forces within a designated area or for a designated operation. In overseas theaters, the DIRMOBFOR is normally responsible for theater mobility force management. The Air Force component commander exercises operational control of assigned or attached mobility forces through the DIRMOBFOR. The DIRMOBFOR monitors and manages assigned mobility forces operating in theater.

Distinguished Visitor (DV)—Passengers, including those of friendly nations, of colonel rank and higher, or equivalent status including diplomats, cabinet members, members of Congress, and other individuals

designated by the DoD due to their mission or position (includes BLUE BARK and COIN ASSIST).

Distinguished Visitor/Mystic Star Message (DV Message)—A classified message dispatched with the DVs name or status code and mission number. This message also establishes Mystic Star priority and requests Mystic Star network and support. This message is usually sent with the advance notice and diplomatic clearance request message.

Due Regard—Operational situations that do not lend themselves to International Civil Aviation Organization (ICAO) flight procedures, such as military contingencies, classified missions, politically sensitive missions, or training activities. Flight under "Due Regard" obligates the military AC to be his or her own ATC agency and to separate his or her aircraft from all other air traffic. (See *FLIP,* General Planning, Chapter 7.)

Enlisted Aircrew Coordinator (EAC)—The appointed NCO crewmember (not necessarily the ranking) tasked with coordinating all enlisted aircrew issues and concerns in regards to a particular mission. Enlisted crewmembers should attempt to resolve most issues and concerns with the EAC who in turn reports to the aircraft commander.

Equal Time Point (ETP)—The point along a route at which an aircraft may either proceed to the destination/first suitable airport, or return to the departure base or last suitable airport in the same amount of time. ETP may be based on all engines operating or with one engine inoperative.

Estimated Time of Arrival (ETA)—Same as estimated block-in time. Landing time is different than ETA.

Estimated Time of Block-in or Block-out (ETB)—Same as estimated time aircraft door will open for arrival or close for departure.

Estimated Time of Departure (ETD)—Same as estimated block-out time. Takeoff time is different than departure time.

Estimated Time In Commission—(ETIC) Estimated time required to complete required maintenance.

Extended Range Operations—For twin engine aircraft, those flights conducted over a route containing a point further than 60 minutes flying time at the one-engine inoperative cruise speed (under standard conditions in still air) from a suitable en route alternate.

Familiar Field—An airport in the local flying area at which unit assigned aircraft routinely perform transition training. Each operations group commander will designate familiar fields within their local flying area. See **Chapter 10** for approved fields and limitations.

First Pilots—First pilots are highly experienced copilots who are qualified according to Volumes 1 and 2 of this AFI to taxi, take off, and land the aircraft from the left seat under the supervision of a qualified AC.

Flight Attendant (FA)—A flight crewmember who provides cabin service, instructs passengers in the use of emergency equipment, directs and controls passengers under emergency conditions, and maintains cabin cleanliness. See **Chapter 13** of this AFI for an amplified explanation.

Global Decision Support System (GDSS)—AMC’s primary execution command and control system. GDSS is used to manage the execution of AMC airlift and tanker missions.

Ground Time—Interval between engine shutdown (or arrival in the blocks if engine shutdown is not scheduled) and next takeoff time. The 89 AW defines this as the interval between door open on arrival and door close on departure.

Hazardous Cargo or Materials—Articles or substances capable of posing significant risk to health, safety, or property when transported by air and classified as explosive (class 1), compressed gas (class 2), flammable liquid (class 3), flammable solid (class 4), oxidizer and organic peroxide (class 5), poison and infectious substances (class 6), radioactive material (class 7), corrosive material (class 8), or miscellaneous dangerous goods (class 9). Classes may be subdivided into divisions to further identify hazard, (for example, 1.1, 2.3, 6.1, etc.).

Instructor Supervision—Supervision by an instructor of a like specialty. For critical phases of flight, the instructor must occupy one of the seats or stations, with immediate access to the controls.

L-Band SATCOM—The 600 BPS satellite communications (SATCOM) system contracted through the International Maritime Satellite Organization (INMARSAT), used primarily for command and control. The system consists of a satellite transceiver, laptop computer, and printer.

Leg Time—Time between door closed on departure to door open on arrival.

Local Training Mission—A mission scheduled to originate and terminate at home station, generated for training or evaluation, and executed at the local level.

Maintenance Status Codes:—

A-1-- No maintenance required. Fully mission capable (FMC).

A-2 (Plus Noun)--Minor maintenance required, but not serious enough to cause delay. Attempt to describe the nature of the system malfunction to the extent that appropriate maintenance personnel will be available to meet the aircraft. When possible, identify system as mission essential (ME) or mission contributing (MC), partially mission capable (PMC), PMC + M: maintenance, PMC + S: supply, PMC + B: both.

A-3 (Plus Noun) -- Major maintenance. Delay is anticipated. Affected units or systems are to be identified as in A-2 status above. Not mission capable (NMC), NMC + M: maintenance, NMC + S: supply, NMC + B: both.

A-4 -- Aircraft or system has suspected or known biological, chemical, or radiological contamination.

Mission—Movement of aircraft from a designated point of origin to a designated destination as defined by assigned mission identifier, mission nickname, or both in the schedule, mission directive, OPord, OPlan, or frag order.

Mission Advisory—Message dispatched by command and control agencies, liaison officers, or ACs advising all interested agencies of any changes in status affecting the mission.

MYSTIC STAR—Worldwide high frequency (HF) network tied together with high quality, dedicated, intersite circuits to provide worldwide communication capability for high-ranking government officials. When activated for a mission, the master net control station at Andrews AFB has the capability to remotely seize control of HF equipment at various locations. Therefore, the airborne operator is always in contact with the operator at Andrews. MYSTIC STAR service is only provided for certain missions.

Operational Control (OPCON)—Functions of command and control involving composition of subordinate forces, authority to approve allocation of assets to specific missions, assignment of tasks, designation of objectives, and authoritative direction necessary to accomplish the mission. This is a higher authority than the command that performs specific mission functions.

Operational Missions—Missions executed at or above TACC level.

Opportune Airlift—Transportation of personnel, cargo, or both aboard aircraft with no expenditure of additional flying hours to support the airlift.

Originating Station—Base from which an aircraft starts on an assigned mission which may or may not be the home station of the aircraft.

Operational Risk Management (ORM)—A logic-based, common-sense approach to making calculated decisions on human, materiel, and environmental factors before, during, and after Air Force operations. It enables commanders, functional managers, and supervisors to maximize operational capabilities while minimizing risks by applying a simple, systematic process appropriate for all personnel and Air Force functions.

Over-Water Flight—Any flight that exceeds power off gliding distance from land.

Permit to Proceed—Aircraft not cleared at the first US port of entry may move to another US airport on a permit to proceed issued by customs officials at the first port of entry. This permit lists the requirements to be met at the next point of landing (for example, number of crew and passengers, cargo not yet cleared). Aircraft commanders are responsible to deliver the permit to proceed to the customs inspector at the base where final clearance is performed. (Heavy monetary fines can be imposed on the AC for not complying with permit to proceed procedures.)

Point of No Return—Most distant point along the planned route from which an aircraft may safely return to its point of departure or alternate airport with approach and landing fuel.

Point of Safe Return—Most distant point along the planned route from which an aircraft may safely return to its point of departure or alternate airport with required fuel reserve.

Positioning and Depositioning Missions—Positioning missions are performed to relocate aircraft for the purpose of conducting a mission. Depositioning missions are made to return aircraft from bases at which missions have terminated.

Quick Stop—Set of procedures designed to expedite the movement of selected missions by reducing ground times at en route or turnaround stations.

Ramp Freeze—Term used at Andrews AFB to denote a set of security procedures within a fixed geographical area on the flight line to ensure the safety of high-level DVs. Generally, all vehicular traffic is prohibited in a designated area except for security police and personnel and vehicles directly supporting the departing or arriving DV.

Scheduled Takeoff Time—That time established in the mission itinerary for departure.

Scheduled Return Date (SRD)—Scheduling tool used by air mobility units to predict when crews will return to home station. It allows force managers to plan aircrew availability and provide crews visibility over monthly flying activities. AMC and AMC-gained aircrews (except those on standby at home station) will have an SRD established on their flight orders.

Significant Meteorological Information (SIGMET)—Area weather advisory issued by an ICAO meteorological office relayed to and broadcast by the applicable ATC agency. SIGMET advisories are issued for tornadoes, lines of thunderstorms, embedded thunderstorms, large hail, severe and extreme turbulence, severe icing, and widespread dust or sand storms. SIGMETs frequently cover a large geographical area and vertical thickness. They are prepared for general aviation and may not consider

aircraft type or capability.

Special Air Missions Management System (SAMMS)—Interactive computer database system used by the 89 AW and USAF/CVAM to schedule and manage 89 AW special air missions.

Special Assignment Airlift Mission (SAAM)—Funded airlift that cannot be supported by channel missions because of the unusual nature, sensitivity, or urgency of the cargo or that requires operations to points other than the established channel structure.

Specifically Designated Special Air Mission (SDSAM)—Any mission specifically identified by USAF/CVAM as requiring special security procedures.

Stations Time—Normally, 30 minutes prior to departure time. Aircrews will have completed their pre-flight duties and appropriate checklists and will be at their crew positions.

Tanker Airlift Control Center (TACC)—The operations center that controls tanker and airlift forces worldwide through a network of computer systems. The TACC is organized into geographic cells consisting of East, West, and emergency action cells. The TACC contains the following functions: Mobility Management, Command and Control, Global Channel Operations, Operations Management, Current Operations, Global Readiness, Weather, Logistics Readiness Center, Aerial Port Control Center, Flight Planning, International Clearances, and Flight Plans.

Tanker Airlift Control Element (TALCE)—Team of qualified Air Force personnel established to control, coordinate, and function as an Air Force tanker and airlift C2 facility at a base where normal AMC C2 facilities are not established or require augmentation. TALCEs support and control contingency operations on both a planned and no-notice basis.

Time Out—Common assertive statement used to voice crewmember concern when safety may be jeopardized.

Training Mission—Mission executed at the unit level for the sole purpose of aircrew training for upgrade or proficiency. Does not include operational missions as defined in this AFI.

Zero Fuel Weight (Actual)—Weight, expressed in pounds, of a loaded aircraft not including wing and body tank fuel. All weight in excess of the maximum zero fuel weight will consist of usable fuel.

Attachment 2

HOSTILE FIRE ENTRY CHECKLISTS (COCKPIT AND CABIN CREWS)

Cockpit Crew. ***NOTE:*** Complete the following procedures not later than 30 minutes prior to entering threat environment.

1. Crew - "NOTIFIED" (pilot [P]). Direct MT to initiate hostile fire entry checklist.
2. Crew briefing - "AS REQUIRED" (P). Review intentions, threat locations, aircraft configuration, and approach requirements. Brief MT on location of observers and likely threat signatures.
3. Survival equipment - "DON" (P, copilot [CP]). If protective equipment is not to be worn, ensure it remains immediately available.
4. Ignition - "LOW IGN" (P).
5. Internal and external lights - "AS REQUIRED" (P). Turn all nonessential exterior lights OFF. Set interior lighting to the minimum required (night only).
6. IFF - "SET" (P). Ensure correct codes are set and proper modes are ON.
7. Navigation and communications radios - "AS REQUIRED" (P). Brief essential radios. To reduce emissions, turn OFF all nonessential radios and equipment.
8. Radar - "AS REQUIRED" (P). If threat dictates or if not required for flight, turn radar OFF to reduce emissions.
9. APU - "START" (CP). Start the APU and verify voltage and frequency within limits.
10. Loose items - "SECURED" (P, CP). Ensure cockpit is secure.
11. Observers - "CLEARED TO POSITION" (P). Direct MT to position observers as briefed. All crewmembers not performing crew duties will scan outside the aircraft for threats, as briefed by the AC.
12. Comm systems - "CHECKED" (P, CP, MT, and first flight attendant [FT]). P and CP will select "PA" on comm panel. MTs and FTs will test the public address (PA) system by announcing, "MT AND FT CABIN READY." Pilot will acknowledge these checks via PA system. ***NOTE:*** Observer reports will be announced by the PA system.
13. Hostile fire entry checklist - "COMPLETE" (P). The medical crew director (MCD) will inform the AC the checklist is complete and cabin is secure via PA system. The MT will report cabin secure to AC before assuming assigned seat.

Cabin Crew. ***NOTE:*** Complete this checklist when directed by the AC.

1. Cabin crew - "BRIEFED" (MT).
2. Survival equipment - "DON" (as required) (All). If wear of protective equipment is not indicated, it will be secured and remain immediately available at all times.
3. Internal aircraft lights - "SET AS REQUIRED" (MT). For night operations, set interior lighting to the minimum required and draw all window shades except at observer rows.
4. Observers - "BRIEFED" (MT). Observers will scan outside the aircraft for threats, as briefed by the AC.
5. Observers - "IN POSITION" (FT and other FAs).

6. Cabin - "SECURED" (MT). Verify with FT that securing straps and safety belts are fastened and equipment secure.

WARNING

The MT will immediately advise the AC if the cabin is not secure for maneuvering.

7. Communications system - "CHECKED" (MT and FT). Test PA system by announcing, "MT AND FT CABIN READY." AC will verbally acknowledge checks via PA system.
8. 8.Hostile fire entry checklist - "COMPLETE" (All). The MCD will inform the AC the checklist is complete and cabin is secure via the PA system. The MT will report the cabin secure to the AC before assuming his or her assigned seat.

Attachment 3

HOSTILE FIRE EXIT CHECKLISTS (COCKPIT AND CABIN CREWS)

Cockpit Crew. ***NOTE:*** This checklist will return the aircraft to normal cruise configuration upon departing the threat environment.

1. Crew - "NOTIFIED" (P). Direct MT to initiate hostile fire exit checklist.
2. Observers - "CLEARED TO REPOSITION" (P).
3. Battle damage assessment - "COMPLETE" (P). The cabin crew will make a sweep of the aircraft looking for damage. The MT will inform the AC of any damage noted.
4. Survival equipment - "AS REQUIRED" (P, CP).
5. IFF - "SET" (P)
6. Navigation and communications radios - "SET" (P).
7. Radar - "AS REQUIRED" (P).
8. Internal and external lights - "SET" (P).
9. Ignition - "AS REQUIRED" (P).
10. APU - "AS REQUIRED" (P).
11. Hostile fire exit checklist - "COMPLETE" (P).

Cabin Crew. ***NOTE:*** This checklist will return the aircraft to normal cruise operation upon departing the threat environment and will be completed upon direction of the AC.

1. Cabin crew - "BRIEFED" (MT).
2. Observers - "REPOSITION" (as required).
3. Battle damage assessment - "COMPLETE" (All). All available crewmembers will make a sweep of the aircraft to look for damage.
4. Battle damage - "REPORTED" (as required) (MT). The MT will inform the AC of any damage.
5. Survival equipment - "DON AND SECURE AS REQUIRED" (All). Protective equipment will be secured.
6. Internal aircraft lights - "SET AS REQUIRED" (MCD). Normal lighting may be used. Shades may be raised.
7. Hostile fire exit checklist - "COMPLETE" (All). The MT will inform the AC the checklist is complete via the PA system.